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Surgery

Cancer of the Colon

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This paper is designed to present a summary of the data covering a recent intensive survey of one surgeon's operative experience in regard to malignant lesions of the large bowel through the fifteen year period 1940 - 1954, together with certain observations prompted by this study. No consideration is given to various operations for non-malignant conditions of the colon during the same years nor is there any discussion concerning patients with cancer of the colon seen in consultation but not subjected to operation for some reason.

A total of 224 malignant lesions was encountered, in 221 patients, distributed from the cecum to the anus as depicted in Table I. This discussion is concerned solely with the group of 133 patients with growths no lower than the rectosigmoid, the rectal and anal lesions being excluded. Three

Table I

The Regional Incidence of Cancer of the Colon and Rectum

The Site	Number	Percentage
Right colon (Cecum 16; Ascending 12)	28	12.5
Hepatic flexure	3	1.4
Transverse colon	17	7.6
Splenic flexure	3	1.4
Descending colon	14	6.2
Sigmoid and rectosigmoid	70	31.2
Rectum	88	39.2
Anus	1	0.5
Total malignant growth studied	224	100

cases are common to both groups, having had two carcinomas resected separately, one in the colon proper and the other in the rectum, both accepted as primary malignancies. In one of these concurrent lesions were found in the cecum and rectum, in another 12 years elapsed between the two resections. No special attention is given to the occurrence of two distinct lesions in the colon: this applied to one case at the time of operation while two others subsequently developed new primary growths elsewhere in the remaining large bowel.

The age distribution of the colon cases is listed in Table II and shows the preponderance in the usual age period. The youngest patient was 24 and the oldest was 85. Males numbered 53 (40%) and females 80 (60%).

Read before the Sectional Meeting of the American College of Surgeons in Winnipeg, April 26, 1955.

Table II

Age Distribution in Carcinoma of Colon

Under 40	10	7.5%
40 - 49	14	10.5%
50 - 59	34	25.6%
60 - 69	42	31.6%
70 - 79	30	22.5%
Over 80	3	2.3%

The time intervening between the commencement of symptoms and the establishment of the diagnosis has been determined as accurately as possible and is set out in Table III. Precise reckoning has been impossible at times because of a vague history, confusion with the symptoms of co-existing diseases, or longstanding conditions such as piles, diverticulitis or colitis.

Table III

The Duration of Symptoms Preceding Diagnosis

Less than 3 months	36	27.1%
3 - 6 months	26	19.5%
6 - 12 months	36	27.1%
More than 12 months	30	22.5%
Uncertain	5	3.8%

It is distressing to realize that diagnosis has been late in a majority of people and that the medical profession is not free from blame in this regard. The sins of omission have been many. Neglect of proper sigmoidoscopic examination is common and bad enough, but surely no one can condone failure to carry out a digital rectal examination or to palpate the abdomen. Frequently the clinician has failed to maintain even reasonable vigilance and to search, repeatedly in the presence of negative findings but a suspicious history, for other positive clues such as blood in the stools and its explanation. We have all been guilty of sins of commission. The most obvious and recurring type of situation is a proneness to explain away suggestive symptoms, with or without some check up, on the grounds of "nerves", "piles", "irritable colon", or other convenient label, and direct therapy at the suppression of symptoms. Valuable time is lost and our public relations suffer. Many sad lessons have emerged in the course of this survey.

One is prompted to stress some elementary and basic requirements for early and accurate recognition of malignancy in the lower portions of the alimentary tract. At all times the clinician must be alert, suspicious and "cancer-conscious", but without causing patients undue alarm. His dependence upon a full history and complete physical examination is axiomatic. Careful digital palpation of the rectum gives invaluable information but the bowel may require cleaning out and preparation as for a sigmoidoscopy. Occasionally

a high lesion may become discernible if the patient strains during the palpation. Laboratory investigations supplement and confirm the clinical evidence; when at variance or doubtful they must be repeated, perhaps several times and at intervals. This applies to stool studies and radiological methods. Flat film and contrast-enema studies in the hands of a competent radiologist are indispensable but no clinician can shed his own responsibility because of the availability of specialized laboratory technics. The use of Barium from above in obstructing conditions of the colon is fraught with danger; an early case from the series under review illustrated this forcibly. Being the father of a graduate nurse, he was given "the works" before the surgical consultant was called in. Then he presented an enormously distended colon plugged full of inspissated barium above a small annular carcinoma of the sigmoid. Staged operative management was necessary and he had a rough course.

Reference to a few other glaring errors from this series may help to underscore the need for medical alertness already stressed and essential for progress in our quest for early and curable stages of cancer in any location. One woman received weekly "liver shots" for months for so-called "anemia" before an examination which revealed a large abdominal mass. In a number of instances, and before any consultation has been arranged, various operations have been carried out directed at "piles", the appendix, the pelvic organs, the gall bladder, or "adhesions" — for symptoms referable directly to lesions accessible to the routine methods of diagnosis. The worst case in point was a woman who had suffered three attacks under general anesthesia, yet her rectosigmoid carcinoma was really very obvious if sought. Two patients beyond any hope of surgical aid denied ever having been examined rectally, although one had attended three different doctors over a matter of three years, and presented the terminal picture of cachexia, ascites, enormous irregular liver, large cervical lymph nodes, etc., all arising from a low ampullary carcinoma of rectum. Lesser mistakes have been many and varied. All have contributed to unfortunate and avoidable delay in the initiation of definitive treatment. Every hopeless cancer has passed through phases during which extirpation and "cure" should have been feasible without difficulty had the situation been appreciated.

Table IV

The Relative Incidence of Leading Symptoms

Altered bowel habit	78	58.6%
Passing blood per rectum	44	33.1%
Abdominal distress	69	51.9%
Anemia, malnutrition, etc.	43	32.3%
Palpable mass	36	27.1%

The leading symptoms and their relative incidence are compared in Table IV. The frequency of either constipation or diarrhea, or both, is in line with other series as also the occurrence of rectal bleeding. The other symptoms are all late manifestations of far advanced lesions. Every grade of distress was noted from simple discomfort to the severe crampy pain of acute intestinal obstruction, but this complaint became prominent only when some measure of obstruction had arisen or extension through the bowel wall to involve other structures. Anemia in company with marked loss of weight and strength appeared especially with advanced lesions on the right side, less often with locations elsewhere, and especially with liver involvement. A palpable mass was by no means a rarity, being either neoplastic tissue per se or in association with inflammatory changes. Digestive complaints were not uncommon while a host of less frequent symptoms simulated every imaginable type of intra-abdominal disease.

Several important pathological considerations emerged from this review. All but one of the growths were adenocarcinomas, the exception being a reticulum cell sarcoma of the cecum. A significant intussusception was identified on five occasions, four times in the right colon and once in the transverse portion. Analysis of the 133 colonic neoplasms regarding predominant pathological characteristics revealed an unusually high proportion of ulcero-infiltrative lesions (94 or 70.7%) at the expense of the polypoid variety (17 or 12.8%); mucinous growths were recorded in 8 (6%) and 14 (10.5%) were not classified. An attempt to grade the carcinomas according to Broder's system is set forth in Table V. It is evident that different pathologists vary markedly in classifying apparently comparable lesions.

Table V

Classification of Colon Carcinomas

Grade I	20	15.0%
Grade II	64	48.1%
Grade III	24	18.0%
Grade IV	2	1.5%
Not graded	23	17.2%

Unfortunately, these growths have not been graded according to the Dukes system. However, the material selected from the individual pathological reports and presented in Table VI illustrates further the advanced state of the pathological process in so many. Careful review in the light of

Table VI

Extent of the Neoplastic Process

Spread through bowel wall (to adjacent structures)	53	39.9%
Lymph nodes involved	57	43.0%
Nodules in liver	24	18.0%
Apparently localized	45	33.9%

the operative findings and the detailed pathological features (covering the regional lymph nodes, neighboring fat, peritoneum, adhesions and invaded structures) justifies the conclusion that only one patient of every three possessed a truly local lesion at the time of operation with a real chance of cure. Frequently microscopic study alone can

differentiate inflammatory from neoplastic attachment to adjacent viscera.

Colonic polypi were discovered in 20 cases (15.0%); 13 were reported as benign while 7 showed changes interpreted by the pathologist as indicative of malignancy. The dangers attending polypi in the colon and rectum are appreciated insufficiently. The resected sigmoid of one man aged 60 contained three polyps besides a stenosing carcinoma. He was kept under observation, cautioned and rechecked completely about every six months. He became careless with time, returning after four years with a new and hopelessly advanced carcinoma of the transverse colon, no doubt arising from another polyp. Such catastrophes demonstrate the need for a radical policy in seeking, removing and following up all polyps of the large bowel as precancerous conditions. It has been stated that perhaps seventy percent of such polypi occur within the reach of a sigmoidoscope. In the 88 patients with rectal carcinoma mentioned at the outset in this paper, polyps were found in 13 (6 showed malignant changes). No familial polyposis cases have fallen within this series but their relationship to cancer cannot be forgotten.

In one patient only did a carcinoma arise on the basis of a longstanding ulcerative colitis. By any standard, he should have had a complete colectomy at an earlier stage; his plight had been horrible for years. Diverticulosis and diverticulitis co-existed with carcinoma in several cases, a fact to be remembered in as much as the pelvic colon is a favorite site for both conditions.

This survey and follow-up have brought to light a number of unusual, distant, late metastases. These include the lung twice, cervical lymph nodes three times, axillary lymph nodes in one, and the neck of the femur once leading to a pathological fracture. It is easy to see how wrong diagnoses become attached to these late manifestations where the colon history is unknown or neglected and tissue sections are omitted.

The various operative procedures contributing to the management of this series have been classified in Table VII and each main group of operations is subdivided further in the succeeding tables. Preliminary procedures were utilized very much

Table VII

Summary of Operations in 133 Colon Cancers

Preliminary procedures	15	11.3%
Resections	104	78.3%
Secondary procedures	14	10.5%
Palliative operations only	29	21.8%

less than in the rectal series and essentially only where obstruction had developed, extreme hazards existed, or associated suppuration posed a problem.

Preoperative preparation in all cases was as complete as the circumstances would permit. Every effort was made to empty and sterilize the bowel and to build up the physical health and mental outlook of the patient. The routine bowel care comprised a low residue but nourishing diet (fortified suitably in deficiency states), colonic lavage daily at least, mild saline laxatives, and exhibition of antibiotics. Sulphasuxidine was favored in the presence of obstruction, for at least five days; sulphthalidine being used more often in the absence of stenosis. For the last three days or so it was customary to add streptomycin. More recently various of the broad-spectrum antibiotics have been utilized increasingly. Although most surgeons tend to lean heavily today upon the antibacterial drugs in this field, as in others, one cannot escape the view that the pendulum has swung too far and we must re-affirm the importance of the basic principles enunciated above plus meticulous technic. Needless to relate, disturbed biochemical balances were corrected as fully and rapidly as possible and judicious use was made of transfusions of whole blood and other special measures as called for.

Table IX

Analysis of 104 Resections for Colon Carcinomas

Right hemicolectomy & ileo-trans. colostomy	28	26.9%
Resection & colo-colic or colo-rectal anast.	65	62.5%
1-stage with associated cecostomy	6	
1-stage without cecostomy	54	
2-stage	5	
Mikulicz resection with temporary colostomy	6	5.8%
Resection with permanent colostomy	5	4.8%

1-stage, 3; 2-stage, 2.

The varieties of resection utilized in the series are indicated in Table IX. Little comment appears to be necessary as standard methods were used in the main. In recent years there has been a tendency to abandon any permanent colostomy for lesions above the rectum proper and the Mikulicz resection is rarely employed. Single stage procedures have supplanted the others wherever possible. Occasional secondary procedures, as summarized in Table X, have been required to close or improve a colostomy or meet some emergency situation within the abdominal cavity or wall, following the resection.

Table X

Secondary Operations in Colon Cancer Cases

Closure of colostomy	5
Revision of colostomy	5
Short circuiting	1
Relief of early, acute small bowel obstruction	2
Drainage of abscess	1
Total	14

There remains a block of cases, 29 in all, in whom no resection could be accomplished. The hopeless extent of the growth precluded any complete procedure. Sometimes an attempted resection was abandoned and the operation is listed simply as a laparotomy. Various types of artificial anus were created as indicated.

Table XI

Palliative Procedures Only in 29 Colon Cases

Cecostomy	8	28.9%
Colostomy	11	37.9%
Short circuiting	11	37.9%
Laparotomy	7	24.1%
Ileostomy	1	3.4%
Ideal resection & redoing colost.	1	3.4%
Drainage of abscess	1	3.4%

Before the results in this series are examined it may be well to reiterate certain principles governing the results in any field of major surgery. In the first place stands the patient who must be considered in his or her entirety. Commonly adverse factors have called for attention, such as extreme age, obesity, degenerative diseases and nutritional problems. Next comes the disease process in the light of its site, extent, complications present, and many individual features. Finally critical observation must include the surgeon, his training, experience and facilities for handling major problems adequately. All these aspects are basic. However, for purposes of discussion one finds it necessary to relate the results more or less directly to the pathological conditions.

It has seemed wise to subdivide the series of 133 patients with colon malignancies into three groups in order to clarify the end results. Group 1, the "Hopeful Cases", and Group 2, the "Doubtful Cases", together include all the resections; the distinction depends on assessment of the operative and pathological findings. In the former the evidence supports the belief that no known malignancy has escaped the removal, while in Group 2 it is either known or strongly suggested that the disease has spread beyond the limits of true operability. Group 3 consists of the cases outlined already in Table XI, the "Hopeless Cases", in whom any sort of resection has been rendered impossible. These subdivisions will now be considered individually starting with the most unfavorable group and progressing to the most favorable set.

Group 3. These 29 patients have all continued with their disease unchecked following various procedures directed towards mitigation of their misery. About half have sunk rather rapidly to die in the course of months. Comparatively few have dragged on for one or more years. One elderly man was followed closely through a remarkable course. The initial laparotomy disclosed great masses of low-grade mucinous carcinoma throughout the abdomen, apparently arising from a primary in the sigmoid. Nine years later he developed complete and acute obstruction at the primary site; this was tided over with the aid of a cecostomy until a further exploration and short-circuiting operation were done and much further material was removed for pathological study. After this he enjoyed three years more of reasonable health before dying of his disease.

Group 2. In many of these it was known that residual malignancy remained in the liver, the peritoneal cavity, or elsewhere, following extirpation of the original lesion; in the others such was inferred to be the situation in view of the obvious spread of the disease. In six cases of this sort adherent loops of ileum were removed along with the segment of colon; in five others concomitant hysterectomy was done because of attachment that appeared to be neoplastic. Extensive blocks of the abdominal wall required removal a number of times, as did various other viscera from time to time, e g. the spleen and part of the greater curvature of the stomach. Many of the operations in this group proved to be truly formidable undertakings, placing an undue strain on all personnel engaged in the procedure itself, demanding much additional after-care, and hazardous for the patient. There are many physicians and surgeons who go so far as to condemn these heroic endeavors on various grounds, overlooking the fact that the battle must be waged against an implacable and relentless foe which kills invariably unless conquered first by drastic measures. If the odds are such that the possibility of "cure" is faint indeed, are we fulfilling our duty to the sufferer, to humanity in general, and to our profession, if we refuse to give even the one chance just because it entails "blood, sweat and tears" for us as well as the unfortunate victim? One then faces the question of just how much palliation must be accomplished in what proportion of these patients in order to warrant prolonged and difficult resections which are of necessity incomplete.

The results will be reviewed before this aspect is touched on again. Tabulated comparison of the mortality statistics in Groups 1 and 2 are listed in Table XII, while Table XIII shows the survivals in the same two groups side-by-side. The heavy mortality toll in the earlier years in Group 2 is extremely striking and what might be expected (66.9% at the end of three years) but the hospital fatalities were not out of line. This figure shows that the more massive resections need not produce a prohibitive death rate. It will be noticed that occasional lengthy survivals appear amongst the unfavorable cases although admittedly they are exceptions.

Table XII

Comparative Mortality Statistics

	Group 1		Group 2	
	No.	%	No.	%
In hospital	2	3.2	2	4.7
1st year	7	11.3	10	23.8
2nd year	3	4.8	12	28.9
3rd year	0	0	4	9.5
4-6 years	4	6.4	0	0

Table XIII

Comparative Survivals

	Group 1		Group 2	
	No.	%	No.	%
10 - 15 years	15	24.2	0	0
6 - 9 years	6	9.7	2	4.7
3 - 5 years	9	14.5	1	2.4
2 - 3 years	2	3.2	0	0
More recent	3		6	
No follow up	7		2	

Group 1. This is made up of the 62 favorable cases with disease either localized, or the extent of spread, either directly or via the lymphatics, strictly limited. As indicated in Table XII, 16 (25.8%) are known to have succumbed from their disease by the end of the sixth year; four others died of established and unrelated causes from 6 months to 11 years postoperatively (3 were cardiovascular deaths and the other was due to severe burns). Table XIII gives an incomplete picture in view of the fact that the follow up has been incomplete especially in the more hopeful group. However, it shows that amongst the favorable cases approximately one-quarter of the entire group is alive and free from evidence of malignant disease after the lapse of ten or more years, and these survivors appear about equally right back to the earliest years under review. The parallel columns illustrate clearly the hopeful figures in Group 1, reflecting the promising pathological background, in sharp contrast to the black picture regarding longevity amongst the unfavorable cases.

In the course of this survey an attempt has been made where possible to obtain reliable subjective, as well as objective, information concerning the postoperative course of the patients. It was hoped that at least a partial answer would be forthcoming pertaining to the benefits or otherwise accruing to those subjected to palliative procedures. There have been some keen disappointments in this regard, as in all cancer surgery. Others have done far better than one dared to hope from the situation existing. One man, with numerous nodules in the liver, is nearing the end of the road only at the time this is being written — six years after the removal of the primary growth, and these have not been only years of misery for he has been quite active until recently. A complicated and unpromising resection was completed in March 1947 in spite of the protests of several in the operating room at the time. The patient, a farmer, made a good recovery and was not seen until one year and eight months later at which time he presented signs of unquestionable recurrence in the liver region, and a history of deterioration going back less than four weeks. When the cards were put squarely before him, face up, the situation originally confronting the surgeon was outlined sketchily and he was asked, "Do you think that it was worth while?" Without the least hesitation, he replied emphatically, "Of course. I have put in and taken off two crops myself and have been able to do my regular work and enjoy it." It is very evident that the biological behaviour of the malignant growths of the colon, and other organs, is subject to many controls not yet understood fully and the responses are frequently most unpredictable. Surely it is our duty to continue to do our utmost, even when the cards are already stacked against us, to relieve suffering and keep hope alive, when dealing with these problems in our fellow human beings.

Summary and Conclusions

1. A survey has been presented covering a personal series of malignant growths of the colon treated operatively over a 15-year period. Brief statistical tables are provided to present the essential data relative to the distribution of the lesions, the leading symptoms and their duration preceding diagnosis, the various pathological aspects and the surgical procedures employed.

2. The unduly high proportion of far advanced cases is truly tragic. The reasons for the delay in the institution of effective therapy are the same as in other fields of cancer treatment. The public is at fault to a degree — through ignorance, carelessness and fear. Much more lay education is needed but there is a real problem confronting those who seek to teach the individuals in need of learning the facts.

3. Much of the responsibility for these cases is medical. Many of the reasons have been discussed and some glaring errors have been mentioned. It has been pointed out that the members of our profession generally must maintain a high index of suspicion of cancer in regard to all sorts of complaints, all the diagnostic methods must be used promptly, and if necessary repeatedly, until the diagnosis has been established or absence of cancer has been proven irrefutably, and definitive treatment should be planned and undertaken without delay in well equipped hospitals by competent surgeons.

4. Polyps in the colon and rectum constitute definitely precancerous lesions. Such were noted in 15 per cent of the series and many showed malignant change already present. Special care is needed to locate and deal with these under many circumstances. Development of a carcinoma may be obscured by pre-existing ulcerative colitis, hemorrhoids or diverticulitis.

5. The principles governing preoperative preparation of colon cases are reviewed concisely and the various operative procedures employed are enumerated.

6. A real effort has been made to follow up all patients and assess the end results of therapy. It has been found helpful to distinguish three groups of cases dependent upon the stage and extent of the disease existing and the type of operation

carried out. These groups are described and the results in each are noted, while in certain respects they are compared and contrasted.

7. The over-all figures following resection in favourable cases are noted with encouragement. Occasional remarkable survivals among the less promising groups demonstrate the extreme unpredictability of the clinical course of some carcinomas. The question of palliation is discussed at some length and illustrative cases are presented.

8. There is great need for improvement in the results of cancer therapy. The greatest hope appears to lie along the lines of early discovery and management of all cases when in the initial phases of group 1. At this time the growth is truly localized and lends itself to relatively simple and complete extirpation, the problems are few and the outlook is bright. This is the ideal until we learn to prevent the development of cancer.

9. Human frailties being such as they are, late cases are bound to turn up and pose difficult therapeutic problems. At the present time it would seem that these unfortunate persons are best served by applying the same general principles as are used for the hopeful cases, namely thorough preoperative build-up, radical excisional surgery if practicable, careful aftercare and follow-up with sympathy and understanding.

New Steroids

Recent reports on the clinical effect of two new groups of steroids closely related to cortisone and hydrocortisone raise interesting speculations in regards to future developments in this field.

The first group of compounds are halogen derivatives of hydrocortisone and cortisone and differ in structure only by the introduction of a halogen in the 9-a position. These compounds have the hydroxal group at the C-17 position, which appears to be the common characteristic of compounds with an anti-inflammation action. In animal experiments these compounds have extremely potent adrenocortical activity. In the work on man that has been described to date, these compounds have an undoubted effect on suppressing the manifestations of rheumatoid arthritis, and to a lesser extent bronchial asthma. It appears that the most commonly used one of the halogen derivatives, fluorohydrocortisone, has a potency of 10 to 20 times that of cortisone or hydrocortisone. However, the clinical usefulness of this compound in the suppressive treatment of many diseases will be limited by its very marked effect on electrolyte metabolism with considerable retention of sodium and loss of potassium. Furthermore, many of the patients developed marked elevations of blood pressure. This extreme effect on the electrolyte metabolism should make this compound useful in the treatment of Addison's disease and may replace desoxycorticosterone in this disease. It appears that small amounts of supplementary cortisone are necessary in most cases. Fluorohydrocortisone has a marked action on suppressing the function of the adrenal cortex in humans and may be useful in the suppression tests for adrenal cortical hyperplasia or adenoma. At first sight this compound would seem to be of considerable value in the treatment of adrenal virilism due to bilateral adrenal hyperplasia, but it is likely that its extreme effect on sodium retention with production of hypertension may limit its value.

The other group of compounds are metacortandracin and metacortandranolone which are dehydrogenated compounds of cortisone and also retain the all important hydroxal group at the C-17 position. It appears that these compounds are two to five times as active as cortisone and hydro cortisone in suppressing the manifestations of rheumatoid arthritis. They differ from the first group of compounds in that they appear to have less sodium retaining properties and cause almost no loss of potassium, as compared to cortisone and hydrocortisone. The preliminary clinical reports suggest that this group of compounds offer promise for the suppressive treatment of many collagen diseases. These compounds would be the choice in cases where marked sodium retention is not desired, for example, in patients with existing elevations of blood pressure or active rheumatic carditis. Apparently some patients who have been on long term cortisone therapy for rheumatoid arthritis could be switched to these new compounds without a great deal of disturbance and in most cases with some definite improvement.

Emphasis must be placed on the fact that these two groups of compounds are only in their experimental stages. No doubt, many of the ill effects of cortisone and hydrocortisone will be exhibited by these compounds. Almost certainly these compounds will suppress the activity of the patient's own adrenal cortex and care similar to patients on cortisone will be required for operative procedures or other emergencies. It would seem reasonable to expect that effects on the psyche and gastro-intestinal tract will be similar to the parent compounds, cortisone and hydrocortisone.

Development of new steroid compounds that differ in certain respects from hydrocortisone and cortisone justifies the hope that further compounds of greater effectiveness and safety are just over the "wonder drug" horizon.

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Epidemiology

History of Poliomyelitis in Manitoba*

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Introduction

The poliomyelitis experience in Manitoba provides an excellent opportunity for study. Records have been preserved since 1918 and are particularly good since the Department of Health was first established under the late Dr. E. W. Montgomery in 1928. Our Deputy Ministers and provincial epidemiologists have shown special interest and have instituted thorough investigations during each of the large epidemics,(1928, 1936, 1941, 1947, 1952 and 1953). Besides these, the unique outbreak among Eskimos in 1948-49, was studied by a Winnipeg Committee and some cases were treated in the Winnipeg Municipal Hospitals. The mass of data that has accumulated from all these epidemics casts some light on many of the difficult problems of epidemiology in this enigmatic infection.

In examining the figures that will be presented, several facts must be kept in mind.

1. These are merely the cases reported to the Department and at best can only be a rough index of what has really taken place. In non-epidemic years there is no doubt that few non-paralytic cases are diagnosed or reported; in epidemic years, in contrast, it may be that over-diagnosis is prevalent.

2. Though all these cases were officially considered to have been poliomyelitis it is now known that other viruses may have been partly responsible in some or all years. Before the last two epidemics (1952 and 1953) the virus was not identified, nor has the degree of participation of other viruses been studied.

All pathological material submitted in 1952 and 1953 have shown the cases to be due to Brunhilde (Type 1). Since no epidemic in this country has been shown to be due to any other type it is fairly safe to presume that all of our epidemics have had the same fundamental cause. But here the enigma of the Coxsackie group always lurks in the epidemiological background; their participation can only be roughly estimated by clinical means. In this connection it should be pointed out that the epidemic of 1947 is regarded as being largely due to Coxsackie, for the following reasons: the case-fatality rate was very low (1.3%); there was very little paralysis and practically no bulbar or respiratory involvement; the clinical picture was dominated by muscle pain and tenderness, which continued over long periods without any neurological signs. Before the identification of the Coxsackie group, the clinical features of this infection were described.[1] With each subsequent epidemic similar cases have appeared and there is no doubt that many of them have been included in the official poliomyelitis record.

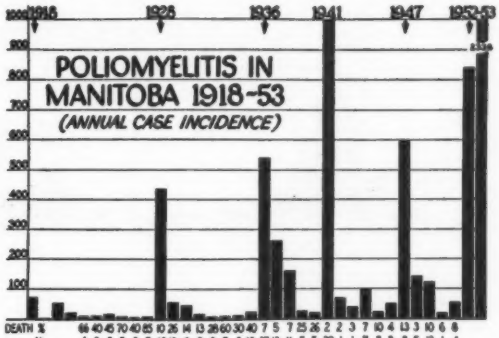


Chart 1

Total Incidence

Sporadic poliomyelitis has been occurring in Manitoba for many years; epidemics are relatively recent. Chart 1 shows the yearly incidence and number of deaths since 1918, before which there is no official record. It will be seen that there have been seven epidemics recorded. In 1918, seventy-five cases were reported; this is possibly due to the "hangover" from the epidemic which was, according to unofficial statements, said to have been quite bad in 1916. It will be seen that each successive epidemic became more severe (again excepting 1947). The relatively free intervals between attacks also tends to become shorter, they are: 9, 7, 4, 5, 4 and 0 years. The surprising feature in this series of epidemics is the occurrence of two large epidemics in successive years (1952-1953). It had become generally accepted that an epidemic in Manitoba conferred a partial immunity for a period of years. The possible reasons for the surprise epidemic of 1953 will be discussed later.

Seasonal Incidence

Chart No. 2 shows the incidence by weeks in each of the six epidemics. Table No. 1 shows the actual number of cases and the percent of the total epidemic for each month. In all cases the date of onset of symptoms is used. The peaks in '28, '36 and '52 are seen to be in September, and those of '41, '47 and '53 in August. The weekly incidence (Chart No. 2) shows considerable variation in the shape of the curve: '36 and '52 both show a fairly definite double peak. There is a tendency for each succeeding epidemic to be more

*From the Department of Health and Public Welfare, Manitoba.

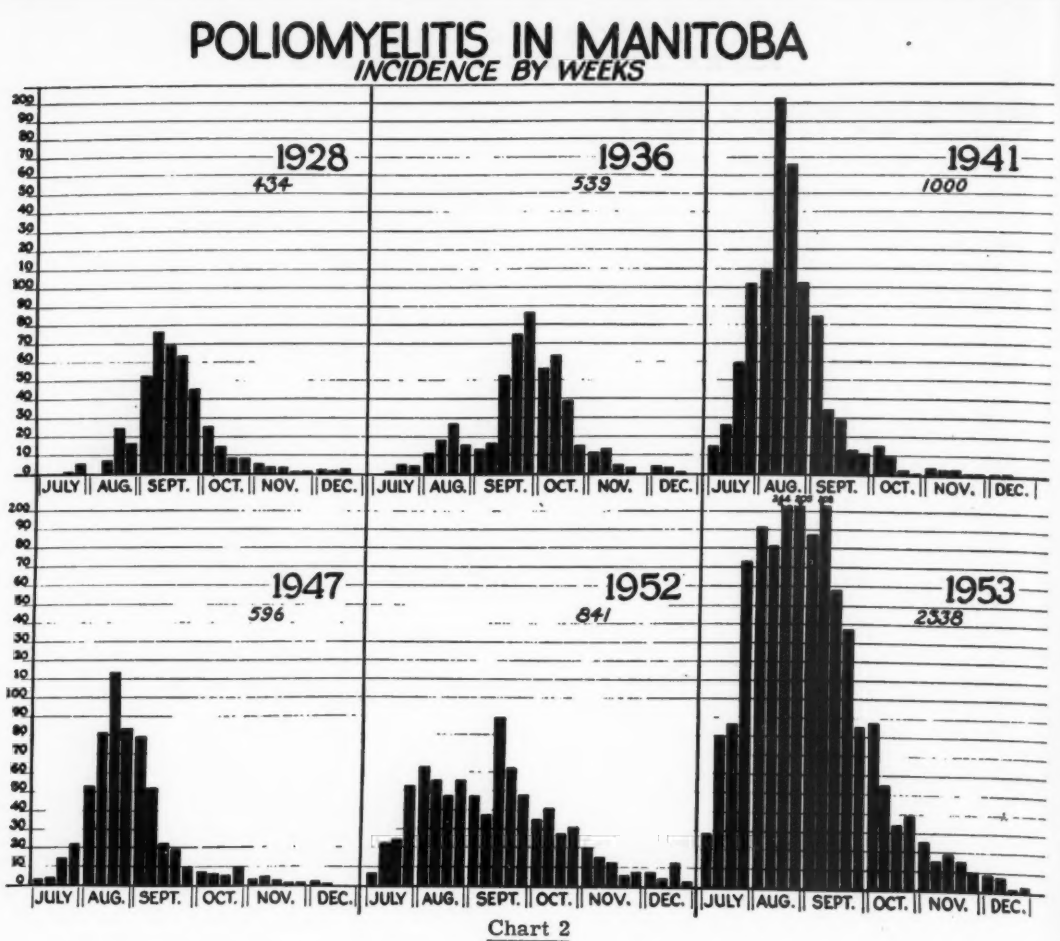


Chart 2

prolonged, the exact duration of each being as follows:

1928	August 1st to October 31st	13 weeks
1936	July 20th to November 16th	18 weeks
1941	July 1st to October 14th	17 weeks
1947	July 12th to November 8th	17 weeks
1952	July 1st to December 1st	22 weeks
1953	June 12th to December 12th	26 weeks

In 1952 and 1953 particularly a considerable number of cases have continued to arise all throughout the following winter and spring.

The seasonal pattern is so consistent that it is difficult to escape the conclusion that meteorological conditions have some influence in their origin. In table 1 the mean temperature for each month is shown (based on official records going back to 1874). The largest percentage of cases first had symptoms in August and September; however, most were doubtless infected in July and August, which are the two warmest months. The precise relationship of temperature and humidity to epidemics is a matter for further speculation and research.

Age Incidence

Chart No. 3 shows in total numbers the age and sex distribution for the last four epidemics. The striking feature is the gradually increasing number of cases in the age group over 20. In 1936 it was the smallest group and in 1953 it was the largest. If we estimate the percentage of cases in each epidemic who were 20 years or older, we get the following figures.

1928	7%
1936	10%
1941	12%
1952	20%
1953	30%

Table 1
Monthly Incidence in Per Cent

Year	No. of Cases	% June	% July	% August	% September	% October	% November
1928	434	0.4	1.3	10.8	70.2	12.6	3.1
1936	539	0.9	1.85	13.0	44.6	32.	6.0
1941	1000	1.0	20.	57.3	17.	2.7	1.5
1947	596	0.3	7.2	55.	30.2	4.5	1.9
1952	841	0.7	12.6	32.	28.	15.5	7.3
1953	2350	1.2	15.5	36.	34.	10.4	2.4
Total	5771	0.8	9.8	34.	37.4	13.	3.7
Mean Temp.		61.9	67.0	64.3	54.3	41.5	22.1

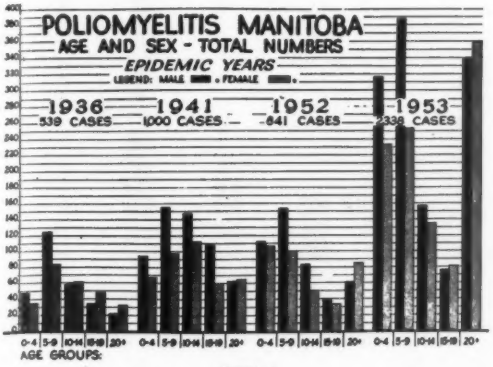


Chart 3

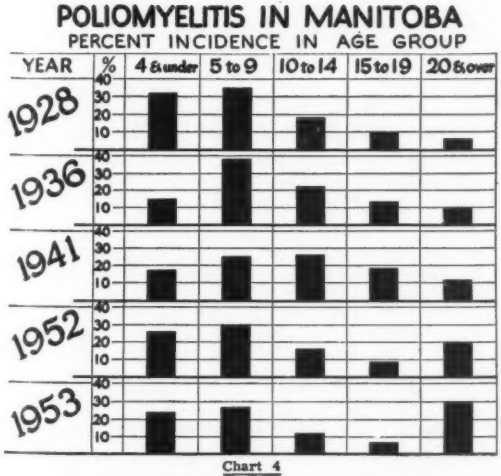


Chart 4

Chart No. 4 shows the percentage incidence in age groups in five Manitoba epidemics. The outstanding feature again is the gradually increasing incidence in those over 20. Also in general the curve tends to become more flat each year, thus approaching the even distribution of non-immune communities.

Charts 3 and 4 give an exaggerated idea of the incidence in the adult group (over 20). This is due to the fact that this group in the general population is about five times as large as each of the others. Chart 5 shows the age and sex rates per 100,000 living in each group. It shows that the over twenty group is still by far the smallest.

Sex Incidence

Charts 3 and 5 show that in the first two half decades, males always predominate. After that the incidence becomes more equal and in some epidemics, (1936 and 1953) females outnumber males after the age of 15. A study of the figures of 1953, for each half decade up to 70, shows that this female predominance lasts only from 15 to 30, when the incidence again becomes slightly higher in males. (From 15 to 29 there were 236 males and 292 females; from 30 to 70 there were 179 males and 148 females). To explain this presents a nice problem for anyone given to speculation.

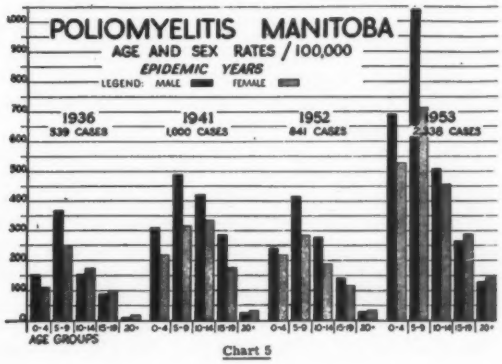


Chart 5

Paralysis Rates

Table 2 shows the percent of each grade of paralysis and the mortality in the three most recent epidemics.

Table 2

	Slight	Moderate	Severe	Deaths
1941	30.	17.	6.8	2.
1952	17.	13.	13.	3.5
1953	19.	17.	8.	3.7

The high percentage of slight paralysis and the low mortality in 1941 is out of line with more recent epidemics. This suggests that the epidemic was heavily diluted with Coxsackie infection. The severe muscle pain in these infections frequently produce reluctance to move, which at first, and especially in children, can easily be mistaken for true paresis.

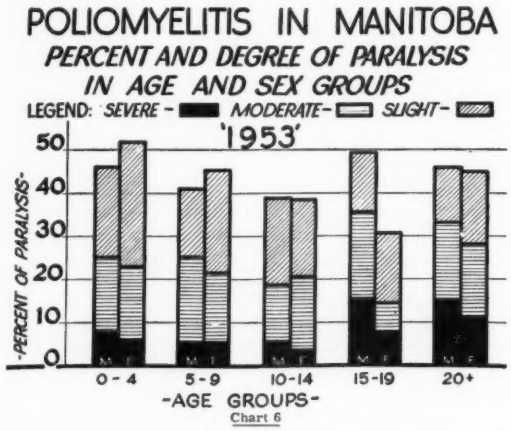


Chart 6

Chart No. 6 shows the age and sex incidence of paralysis in percent in 1953. It shows that severe paralysis is more common in the older age groups. This was also the case in 1952 when 72% of the patients who were 20 or over died or had some degree of paralysis, while in those younger than 20, only 40% met this fate.

These figures give a more serious impression than is justified because they are largely derived from the first notification. It is well known that many cases, who during the acute stage, have considerable degrees of weakness or actual paralysis, make a complete recovery.

It can be safely predicted that all the cases here reported as "slight" and at least half the cases reported as "moderate", will have little or no disability; also many of those who seemed to have severe paralysis at the onset will recover or will show marked improvement. This is borne out by a recent follow-up study of the 1952 cases. This shows that the residual paralysis (18 months after onset) — moderate 7% and severe 7%. Comparison with Table 4 shows this to be little more than one-half of the paralysis originally estimated. A similar improvement in the 1953 figures will take place during the next year.

Case Fatality Rates

The figures showing total cases and deaths since 1928 (26 years) are as follows:

Cases

Total	Average Annual
7040	263

Deaths

Total	Annual	Percent
335	13.0	4.7

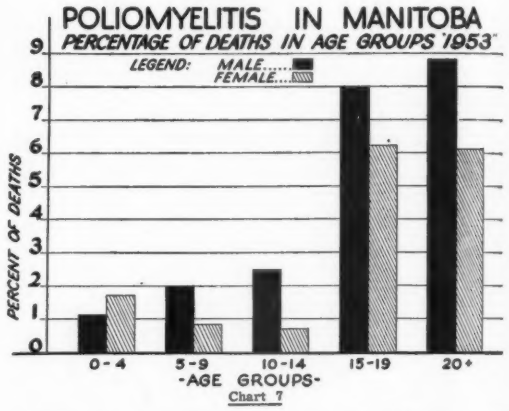


Chart 7

The epidemic case fatality rate has been quite irregular.

1928	10%
1936	7%
1941	2%
1947	1.3%
1952	3.5%
1953	3.7%

The relatively low rates in the past three epidemics may be partly artificial and due to circumstances already mentioned, i.e., changing criteria for notification and participation of other viruses. The low rate of 1947 is possibly due to the inclusion of cases caused by the Coxsackie group of virus.

The case fatality rate in the intervals is higher:

1929-35	25%
1937-40	7%
1942-46	4.7%
1948-51	6.7%

Higher rates in sporadic cases has frequently been referred to. Chart 1 shows clearly that in non-epidemic years the percentage of deaths is sometimes over 50%. Whether or not one of the other viruses (Lansing or Leon) may have been responsible for sporadic cases, can never be known.

Slackness in notification and difficulty in diagnosis may also be factors. During non epidemic years practitioners are naturally loath to mention the possibility of "polio" except on very convincing evidence, consequently very few mild cases are diagnosed or reported.

In every epidemic the mortality has been higher in the older age groups. This is illustrated in Chart 7, which shows the percent of deaths at each age group in 1953. In the first three half decades, (O - 14) the average is 1.6%; in adults (15 or over) the average is 7.3%. In all age groups except the first half decade, death is definitely more frequent in males.

Geographical Distribution

The map shows the southern quarter of the Province of Manitoba divided into the fifteen census areas. This section contains more than 90% of the total population of the province (800,000). The map shows the official number of each census area in large figures, with the population density (number per square mile) following it in brackets. The bar graph in each area shows the rates per 100,000 for each of the five epidemics. The city of Winnipeg is included in area No. 6, but is also shown separately in the circle (upper right). The total population in 1926 was 700,000 and in 1953 it was 800,000. The slight changes in population in each area have been allowed for in estimating the rates for each epidemic.

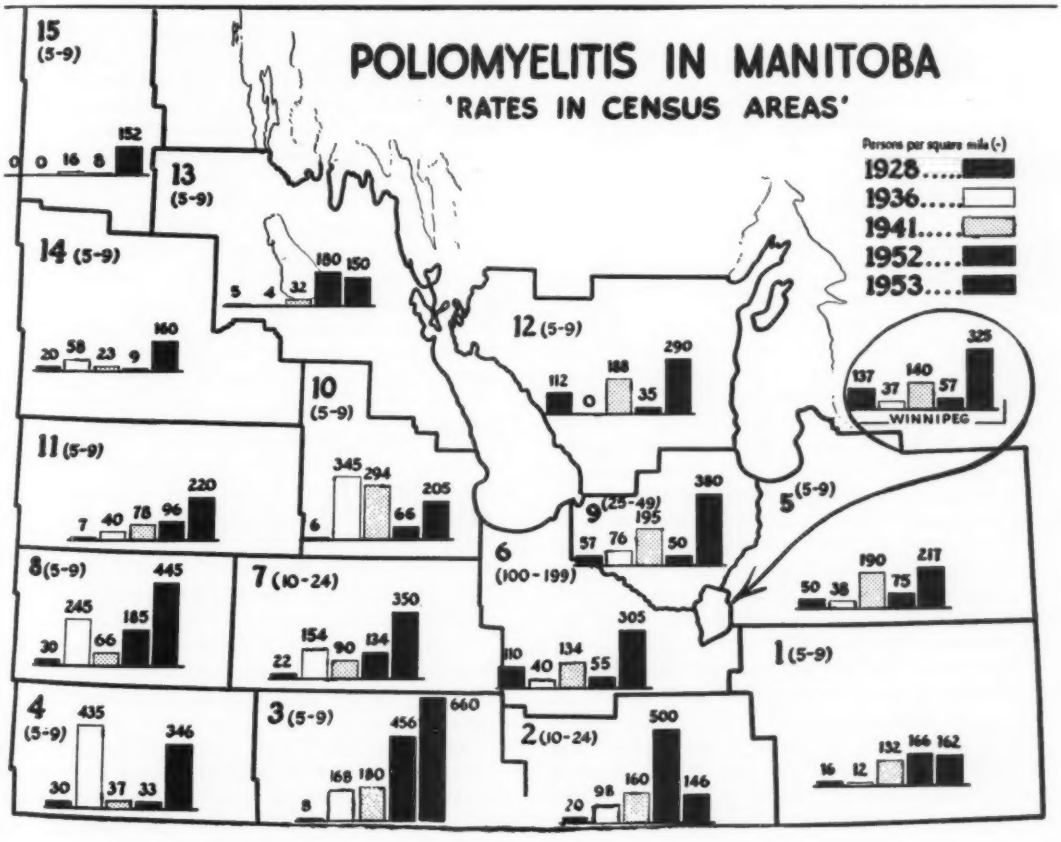
The total provincial rate shows a tendency to increase with each epidemic. They were as follows:

1928	62
1936	77
1941	137
1952	108
1953	300

Each epidemic is seen to have a separate pattern.

In 1928, the vast majority of the cases (80%) were in Winnipeg and its suburbs. The only areas with a rate over 50 were those immediately contiguous to the city. Other areas had only occasional cases.

In 1936 the epidemic commenced in the south-west corner of the Province and spread eastward. Over 60% of the cases were in the south-west



quarter of the province. No other parts of the province had a rate over 50 and Winnipeg had a relatively mild attack, with a rate of 37 (compared to 77 for the province).

In 1941 the epidemic attacked the central part of the province. Winnipeg and the contiguous areas all had rates of over 100 as did also the two south central areas.

In 1952 the brunt of the attack was in the south central part: Areas 2 and 3 each had rates over 400. No other part of the province had a comparable rate.

The epidemic of 1953 struck in all areas, none having a rate of less than 150 and one (No. 3) going as high as 660. Winnipeg had the highest rate in its history (325). For the first time the north western corner of the province had rates over 100.

The average total incidence for the 5 epidemics for the 15 areas is 685 cases per 100,000. Table 3 shows the actual number in each area and the relation in per cent to the average.

Table 3

Area No.	Cases	Comparison to average
1	488	71%
2	924	135%
3	1472	215%
4	881	130%
5	570	83%
6	644	94%
7	750	110%
8	971	141%
9	750	110%
10	910	133%
11	441	64%
12	625	91%
13	372	54%
14	310	45%
15	176	26%
Winnipeg	696	101%

It is seen that the southern and central part of the Province has had the highest rates — areas 2, 3 and 4 which are contiguous to North Dakota were particularly hard hit. The areas north of these (7, 8, 9 and 10) show rates that are slightly above average. Area 6 presumably escaped with normal rate because it includes the city. Throughout the central part (radiating from Winnipeg) the rates are about average. The two eastern areas (1 and 5) are slightly below average and the northwestern corner has been almost immune until 1953.

The various factors that may contribute to this distribution of cases are discussed below.

1. Density of Population

This is obviously not a consistent factor. The city of Winnipeg had a total rate of 696 which is average. It is possibly significant that the highest relative rate in Winnipeg was during the first epidemic, when the rate was more than twice as high as that for the whole province (137 compared to 62). Crowding has a double effect on spread of infections; during epidemics, contact is certainly facilitated: this very fact increases immunity: also in inter-epidemic periods there are more subclinical cases and consequent immunization is taking place. In those parts of the province that do not include suburbs of Winnipeg the gross census figures (in brackets on the map) indicate a fairly even distribution of the population. In spite of this, the south-eastern and north-western corners are much more sparsely populated than the central and southern parts. One can therefore say that, outside the city of Winnipeg there is a rough correspondence of incidence and density of population.

2. Facility of Communication

This no doubt, is directly related to density of population. In the southern and central areas, all means of transport are much better than in the north-west and south-east corners.

3. Topographical Considerations

It may be significant that the higher rates prevail in the great central plains where the elevation is 1200 feet and under, the whole country is quite flat and there are no forests. This plain is a continuation north of the Mississippi valley; in Manitoba it funnels out to include the lake districts and the Hudson Bay. This low, flat treeless plain corresponds roughly to the most highly infected areas. The relatively immune north-west corner is higher and less flat and sparsely wooded. The south east corner is also partly wooded. The prevailing wind is from the south and strikes in its greatest force just in the area most infected. Can it be that the virus, like the rust spore, is brought in partly by this means?

4. Meteorological Conditions

There is no doubt that warm weather is conducive to epidemics. This might be a factor in producing a higher total rate in the southern areas.

Epidemiological Comments

The course of events indicated by the above figures is not unlike those in all similar communities in comparable latitudes. Sweden's experience with poliomyelitis, is, in many respects, similar to that of Western Canada.[2] The chief features are:

1. The recent advent of epidemics.

2. Increasing frequency and severity of epidemics.

3. A gradual change from an infantile disease to one that tends to infect all ages.

4. Higher morbidity and mortality rates among older people.

It is significant that epidemics have not yet occurred in semi-civilized communities (e.g., South African natives) nor in countries in which public health activities are still backward, (e.g., U.S.S.R.,

Chile and Brazil). The explanation for the apparent anomaly is usually stated as follows:

1. Where hygienic principles are not applied, especially where there is no sewage disposal, the infection is ubiquitous and perennial so that the majority of people become infected and thereby immunized in childhood. This is borne out by antibody surveys and by the fact that the vast majority of the sporadic cases in such places are in the first few years of life (e.g. in Brazil 85% are in the first three years).

2. In countries where public health principles are enforced many people escape childhood infection and the consequent concentration of susceptibles renders epidemics possible when other conditions are propitious. The gradually increasing age incidence in each succeeding epidemic conforms to this theory.

Possible Causes of Epidemics

To explain the periodicity of poliomyelitis is a major epidemiological problem. The principles generally advanced to account for periodic outbreaks of infectious diseases are discussed below.

1. Concentration of Susceptibles

In order to produce rapid spread of any infection, susceptible individuals must be closely spaced. Or perhaps, it is more accurate to say that the more closely they are spaced the greater is the chance of rapid spread. This principle no doubt applies to poliomyelitis, and the accumulation of susceptibles, between epidemic years is a factor in producing the next epidemic. In communities where poliomyelitis has never been known, a single focus of infection may produce a pandemic. This was illustrated in the Arctic epidemic of 1949 at Chesterfield.[3]

2. The Number of Foci of Infection:

The number of foci of infection obviously must increase the chances of epidemics. The surprising outbreak in 1953 may have been partly caused by an unusual number of foci carried over from the 1952 epidemic which was very widespread and much more prolonged than is usual: cases continued to appear throughout the winter and only the month of April was free (Chart 2). This is a difficult problem because we do not know where and how the virus lives between epidemics. However, it seems highly probable that it is kept alive in human carriers, some of whom have not had the clinical disease. This supposition is strongly supported by the method of spread among Eskimos in 1949.[3]

3. Facilities for Contact

Facilities for contact must contribute to the spread of all epidemics. Most of the common infections in this latitude have their greatest incidence in the autumn and early winter when windows and doors are closed and people crowd together in homes and schools. Poliomyelitis is an exception to this general rule since the peak of most epidemics occurs when the population is most widely dispersed and to a large extent living in the open air. This is not to say that contact is not important in dissemination. Indeed intimate personal contact is probably the chief method of transmission.

4. Insects and Other Living Vectors

Insects and other living vectors which entirely account for the dissemination of some infections have never been shown to play an important part. It has been shown that faecal-feeding flies, under experimental conditions may carry the virus on their bodies and transmit it to food, but it has never been shown that this is a common method of spread in civilized communities. J. H. S. Gear (Johannesburg, South Africa)[4] has made an exhaustive study of this question. He points out that in Northern Rhodesia, extensive D.D.T. spraying was conducted by which flies and mosquitoes were much reduced in numbers and malaria was eliminated; in spite of this, two large epidemics of poliomyelitis occurred soon after. Other communities have had similar experiences. The common coincidence of poliomyelitis and the insect season probably depends on the fact that both insects and viruses thrive under similar weather conditions. Mosquitoes obviously cannot be obligatory hosts or common vectors because many epidemics have occurred in places and in seasons where no mosquitoes could possibly exist. Many attempts have been made to show that mosquitoes of various species can transmit the virus from infected to non-immune monkeys. These have all failed.[5, 6]

5. Meteorologic Conditions

Meteorologic conditions have always been suspected of contributing to the incidence of epidemics. Both Hippocrates and Sydenham spent much of their energies in studying this relationship. It is now known that the infections which were then rampant — typhoid, malaria and dysentery — are to a large extent spread by insects and are only secondarily related to weather. The relation of poliomyelitis epidemics to summer weather is so consistent that it cannot be ignored. A study of Manitoba epidemics in relation to weather shows that epidemic years have always been relatively hot and moist.

6. Precautionary Measures

Epidemics of some infections can be completely prevented by specific means (e.g. typhoid, diphtheria, small pox); others can be obviated by attacking the vectors (e.g. Malaria and Western Equine Encephalitis), and some may possibly be curtailed or minimized by quarantine measures (e.g. measles). Unfortunately for the three most damaging infections, the common cold, influenza and poliomyelitis, there are no dependable methods of prevention or control.

Considering all these factors we can only conclude that each epidemic has a complex cause. Three influences appear to be definitely involved in the production of poliomyelitis epidemics in Manitoba — concentration of susceptibles, number of foci and weather. In each epidemic each of these contributes to a different degree. In the Chesterfield epidemic there was only one focus of infection and Arctic winter weather prevailed; the epidemic was entirely due to the fact that the whole settlement was susceptible. The 1953 epidemic in Manitoba could have been precipitated by a large number of foci plus abnormal humidity, even though the concentration of susceptibles must have been relatively low.

Summary

The history of Poliomyelitis in Manitoba has been reviewed and the epidemiological factors show the same changes as those in other places of comparable latitude.

The disease has ceased to be sporadic, and has become the most destructive of epidemic diseases.

The age incidence has gradually increased.

Seasonal variation is striking, and changes little from one epidemic to another.

Note: The authors wish to express their gratitude to Mrs. Eric Brickel and her staff for the meticulous care in which they have kept the epidemiological records.

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"Problems of the Newborn Infant"

A series of case reports and commentaries from the files of the Winnipeg General, St. Boniface and Children's Hospitals, illustrating factors which affect the survival of the infant during his first week of life.

SERIES IV

Is Death Due to Congenital Heart Disease in the Newborn Infant Preventable?

Harry Medovy, M.D.
Dept. of Pediatrics, University of Manitoba

Congenital heart disease is apt to occur in approximately 8 out of every 1,000 live births. At the Maternity Pavilion of the Winnipeg General Hospital, with 4,000 deliveries in 1954, the expected incidence would be 32. The actual number cannot be told with certainty at birth since the diagnosis may not be made for many weeks or months. Many will survive without difficulty. Some will lead a precarious existence for a few weeks or months. Surgery will improve the lot and even save the lives of more and more of these babies each year as medical knowledge and surgical techniques improve.

The remainder live a few days or, at most, a few weeks, then die. It is with this group that this report is concerned. Can we hope that our diagnostic methods and the refinements of cardiac surgery will enable us to save some of these newborn infants? We cannot save them all, since the malformation may involve many parts of the heart, and other organs of the body may also be abnormal. We must also bear in mind that it is preferable to try and sustain these infants by every medical means for as long as possible so that more careful diagnosis can be made and the indications for surgery become more clear.

There are, however, cases that develop early cardiac failure and who will not and cannot survive their first few weeks unless they are helped.

Two cases from the files of the Study* group well illustrate some of these points.

Case 1

Baby Boy F. — Born July 29th, 1952; Died October 16th, 1952. Normal term delivery. No maternal disease. Cyanosis and dyspnoea of severe degree developed a few hours after birth. On examination cyanosis was severe, generalized and continuous. Liver was enlarged 2 cms. below costal margin. There were periods during which swelling of hands and feet occurred. The heart was enlarged clinically and radiologically. There was a Grade 3 rough systolic precordial murmur, best heard in 2nd - 3rd left interspace at left edge of sternum. E.C.G. showed right ventricular hypertrophy. Femoral pulse was felt bilaterally. The infant was treated with Digoxin and Oxygen as necessary and for a while seemed to respond. However, cyanosis and dyspnoea became more marked and evidence of heart failure developed at 2 months of age. The baby was again hospitalized. E.C.G. showed increased evidence of right ventricular hypertrophy. P waves were tall and peaked in leads 2, 3 and AVF (Pulmonary hypertension). X-ray showed considerable increase in heart size. The clinical diagnosis rested between transposition of great vessels and pulmonary stenosis. The accentuated P waves and the nature of the murmur favoured the latter diagnosis.

Death occurred October 16th, 1952. At autopsy great dilatation and hypertrophy of right atrium

*From the Neonatal Mortality Study Group assisted by a Dominion-Provincial Health Grant.

and ventricle were noted. The pulmonary valve cusps were fused so even a fine probe could not be passed. The ductus was patent. The foramen ovale was patent. The ventricular septum was intact.

Diagnosis: Pulmonary Valvular Stenosis with intact Ventricular Septum.

Case 2

Baby Boy F. Born April 25th, 1954; Died May 4th, 1954. Normal pregnancy. Gestation 40 weeks. Maternal age 22. At 3 days of age infant began to have cyanotic spells and to develop oedema. A precordial systolic murmur was noted and the femoral artery pulse could not be felt on either side. Heart rate and respiration were rapid. A diagnosis of Coarctation of the Aorta with cardiac failure was made. The infant was digitalized and appeared to be improving. X-rays April 28th, 1954 showed cardiac enlargement. E.C.G. showed right ventricular hypertrophy. Surgical consultation was obtained. It was decided to withhold surgery as long as the infant appeared to respond to digitalis. Death occurred suddenly at the age of 9 days.

At autopsy a coarctation of the aorta was found. The ductus arteriosis was closed and joined the aorta distal to the coarctation.

Diagnosis—Pre-ductal Coarctation of the Aorta. (Infantile Coarctation).

Both of the cases noted above could theoretically have been treated surgically. In the second case the diagnosis was certain; in the first case the diagnosis was reasonably certain and with our present diagnostic facilities, all doubt could have been removed.

Coarctation of the aorta has been treated by surgical excision in the first year of life in many centres. Five cases of post-ductal coarctation (the ductus is joined to the aorta above the site of coarctation) have been operated upon in Toronto with no deaths. The youngest case was 5 weeks. The others were operated upon at 3 months, 5 months, 9 months and 11 months. Ten cases of pre-ductal coarctation, as in our case above, have been treated surgically with 5 deaths. The difference in mortality is due to the presence of good collateral circulation in the post-ductal group, the so-called "adult" "coarctation." The mortality in the pre-ductal or infantile group in the first year in untreated cases was 89%, in the surgically treated cases 50%.

In the post-ductal group, 60% of the untreated cases died in the first year as compared with survival of all 5 cases treated by surgery. It should be borne in mind that these were all cases which presented with cardiac failure. Many infants with coarctation have no symptoms at all in their first year. Operation in these cases may be deferred until they are 2 or 3 years of age.

As for pulmonic stenosis the occurrence of severe failure in the first few days and weeks of life, the demonstration by electrocardiogram and, if necessary, cardiac catheterization of a severe degree of pulmonary hypertension should lead to serious consideration of surgical correction by pulmonary artery valvulotomy. Several cases are now on record of successful cure by this means in early life. Here again the objective should be not to operate as early in life as possible but to operate if survival seems impossible otherwise.

Summary

The newborn infant who has congenital heart disease and goes into cardiac failure may have a malformation that can be treated surgically. Every effort should be made to reach a diagnosis quickly and with as great accuracy as possible with the diagnostic aids we now have on hand. Digitalis should be used to control and alleviate failure in the meantime. If medical treatment appears to be failing, the possibility of surgical help should be considered without delay. The cases detailed above are examples of cases which in the future should be given the opportunity of help by cardiac surgery.

Case No. 2 is presented by kind permission of Dr. S. A. Boyd.

Medicine

Gastroscopy

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The value of gastroscopy in the diagnosis of gastric disorders and in observing the progress of gastric lesions is not generally appreciated. It is widely believed, except among radiologists, that the X-ray report is for practical purposes infallible. A recent statement that "the greatest role the gastroscopist plays is in confirming or ruling out the presence of a lesion at some site in the stomach where the radiologist suspects it" (Wilson 1955) is in direct contrast with the views of experienced gastroenterologists. Palmer (1949) states bluntly that it is not enough to reserve gastroscopy for elucidation of the Roentgen-detected lesion and Tanner, a gastroscopist and surgeon of vast experience, in a series of 2,200 gastroscopies reported ten years ago (Tanner 1944) found thirteen proved carcinomas and one hundred and fifty-nine gastric ulcers, the existence of which was not suspected radiologically. These figures have been multiplied since (Tanner-personal communications).

Gastroscopy is in no sense a rival to radiology for the two examinations are clearly complementary. Reliance on either method to the exclusion of the other leads to errors in diagnosis which at times are disastrous, but with the two methods a very high degree of accuracy in diagnosis can be achieved. No combination of methods of investigation, however, has yet reached perfection.

The Hermon Taylor Gastroscope

The greatly enhanced value of gastroscopy with this instrument is due mainly to the fact that the flexible portion of the instrument is under the control of the operator. Thus it is possible:

(1) To "see around the corner" and visualize lesions near the pylorus particularly in the J shaped stomach (fig. 1).

(2) To see the upper half of the lesser curvature by moving the objective away from the lesser curvature (fig. 2).

(3) To obtain views of a lesion from various angles and distances and thus determine more accurately its nature and extent.

(4) To explore a gastric stoma more thoroughly than is possible with passively flexible instruments.

(5) To introduce the instrument under vision into a deformed stomach.

(6) To visualize the fundus of the stomach more completely (fig. 3).

The movable end of this instrument is not a minor modification. It permits accurate inspection of the very areas of the stomach which cause the radiologist the greatest difficulty.

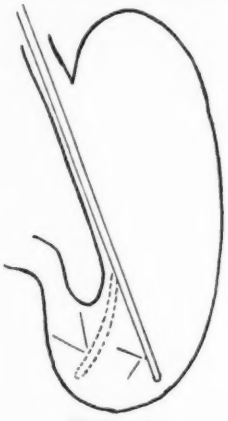

Figure 1

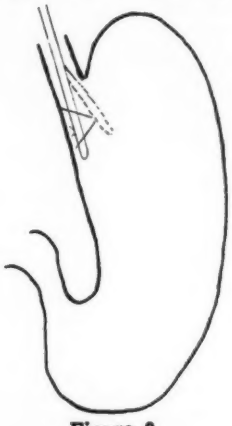

Figure 2

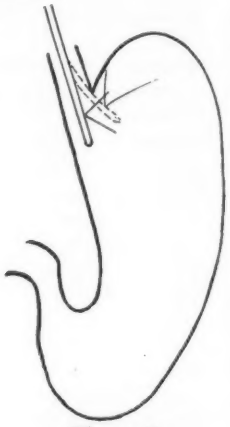

Figure 3

The flexible portion of this instrument is shorter than that of other gastroscopes and this permits a reduction in the number of short focus collecting lenses in the optical system which in turn results in a more brilliant and less distorted picture. The longer rigid portion minimizes the chances of production of a double curve in the flexible portion with resulting slit views or complete obliteration of the picture.

The oesophagus is a curved tube which can be perforated relatively easily. Any form of instrumentation therefore must be conducted with delicacy and the Hermon Taylor instrument being more rigid must be introduced with considerable care and discretion. Thoracic kyphosis, if more than slight, contraindicates the use of the instrument. If difficulty is encountered, the operator must be ready and even eager to abandon the examination. Great perseverance is not a virtue

in the gastroscopist — his only reward is likely to be mediastinitis.

With careful attention to the position of the patient and delicate handling of the instrument, leakage from the oesophagus should be very rare. The patient, however, should remain in hospital overnight as prompt recognition and adequate treatment remove much of the fear of this complication.

Because the cavity of the stomach is not symmetrically disposed around the axis of the gastroscope and there is a very wide range of normal appearances, training in gastroscopy is necessarily slow.

Indications for Gastroscopy

(a) Gastric Ulcer

All cases of gastric ulceration should be gastroscoped even if surgical cure is contemplated. Chronic atrophic gastritis is commonly associated with gastric ulceration and although the clinical significance of atrophic gastritis is not yet fully understood, Magnus (1952) has shown it is a pathological entity and Doig and Wood (1950) consider it a cause of flatulent dyspepsia. It is the author's experience that anorexia, morning vomiting and vague epigastric discomfort are commonly associated with chronic atrophic gastritis proved gastroscopically. Therefore, it is important to warn the gastric ulcer patient who also has chronic gastritis that removal of the ulcer will not necessarily render him entirely symptom free.

Gastric ulcers may be multiple. In this connection it is well to remember that a small gastric ulcer can cause as much pain as a large one, but a small ulcer may defy detction by the radiologist or even by the surgeon, particularly when one obvious ulcer is present. The gastroscopic demonstration of a second ulcer will call for some modification of the standard gastrectomy to remove both ulcers and ensure a good result.

Gastroscopic visualisation of an ulcer may reveal unexpected evidence of malignancy.

Repeated examination of an ulcer under treatment is the best method of confirming or refuting a diagnosis of benign ulcer and is the only really satisfactory method of establishing that the lesion is completely healed.

The question of "ulcer-cancer" is outside the scope of this article. The author has yet to see a benign ulcer followed gastroscopically become cancerous, and Swynnerton and Tanner (1953) point out that two hundred and sixty-two gastric ulcers proved gastroscopically, treated medically and followed for up to twelve years failed to develop a carcinoma at the ulcer site. Between them these cases provided nearly 3,000 years of ulcer history.

(b) Carcinoma of the Stomach

A negative X-ray examination should not be allowed to allay a clinical suspicion of gastric malignancy. Gastroscopy is mandatory if the clinician suspects malignancy and the X-ray is negative. A second gastroscopy if the first is negative, should always be advised in these cases. On two occasions the author has found a small antral carcinoma at a second examination.

To be of value in the exclusion of gastric malignancy gastroscopy must be "successful." That is full introduction of the instrument should be achieved without undue difficulty, antral peristalsis should be observed and a complete or at least a partial closure of the pylorus must be seen. A recent personal case illustrates the danger of making a diagnosis on an "unsuccessful" gastroscopy. A man of fifty-six years was gastroscoped to exclude malignancy. A small erosion of benign appearance was seen immediately distal to the angulus but a pyloric closure was not seen. A diagnosis of healing gastric ulcer was made but insufficient stress was laid on the fact that the pylorus had not been seen. Laparotomy some six weeks later disclosed a pyloric carcinoma with metastases. X-ray, cytological studies and gastroscopy all failed to make a correct diagnosis. Absence of antral peristalsis with consequent failure to see the pylorus should have raised the suspicion of malignancy distal to the benign erosion.

When the radiologist suspects malignancy but is doubtful, gastroscopy may clinch the diagnosis.

(c) Functional Dyspepsia

It cannot be too strongly emphasised that the diagnosis of functional dyspepsia is untenable when based on a negative barium meal examination. One has many times demonstrated gastric ulceration, atrophic gastritis or malignant disease in so called functional dyspeptics with negative X-ray findings. It is important to remember that although over 90% of duodenal ulcers present with classical ulcer symptoms, more than 30% of gastric ulcers and most cases of chronic gastritis commonly present with vague symptoms which can easily lead to a diagnosis of functional dyspepsia. This is particularly true of elderly patients. Boles and Dunbar (1946) have emphasised that peptic ulceration is often unrecognized in old people. At times gastroscopy in the functional dyspeptic proves to be of therapeutic value as it is possible to reassure the patient with considerable authority when the clinical picture is consistent with a positive diagnosis of functional dyspepsia and X-ray and gastroscopic findings are negative.

(d) Haematemesis and Melaena

In a recently published series of 1,490 cases of massive gastrointestinal haemorrhage the bleeding was proved to come from the stomach in over 50%

of cases (Tanner 1954). The same author advocates gastroscopy within one to three days of the bleeding and it is certain that in expert hands this is a most rewarding procedure. The presence of a small shallow ulcer, or multiple small ulcers may be established by this means and these are the cases in which the subsequent X-ray examination may fail to reveal the cause of the haemorrhage. Furthermore, the gastroscope may detect a bleeding lesion so small that it defies discovery at operation or even when the specimen has been removed unless the mucosa is scrutinized most particularly.

If immediate gastroscopy is not possible a later examination is still worth while. Recently, gastroscopic examination of a patient who had suffered a severe haematemesis four months before examination and in whom X-Ray studies were negative, disclosed the small scar of a soundly healed gastric ulcer less than half an inch below the cardia on the lesser curvature.

Many authors have pointed out the advantages to be derived from early gastroscopy in gastrointestinal haemorrhage. Avery Jones (1943, 1947) gastroscoped 116 cases undiagnosed after clinical and radiological study, finding gastric pathology in eighty-six cases, sixty-five of which had gastric ulceration.

In forty-one such cases examined personally the cause of the hemorrhage was established in twenty-seven. Haemorrhage from an oesophageal ulcer should be suspected from the history of substernal pain produced by bending forward or lying down and the presence of some dysphagia. Gastroscopy should be avoided in such cases because of the danger of oesophageal perforation and oesophagoscopy performed first. Similarly, oesophagoscopy is indicated if oesophageal varices are suspected.

(e) Anastomotic Ulcer

The various pouches and indentations about the suture line make radiological diagnosis of this lesion particularly difficult. It is also an extremely difficult lesion to see gastroscopically, particularly if the ulcer is some little distance from the stoma down the efferent loop. Nevertheless gastroscopy is frequently extremely valuable in the diagnosis. Renshaw (1944) found that the addition of gastroscopy to the X-ray examination improved the diagnosis in 14% of cases. Personal experience with the Hermon Taylor gastroscope has shown an improvement in diagnosis of 28%.

(f) Anaemia with Occult Blood in the Stools

When anaemia is thought to be due to chronic blood loss from the intestinal tract gastroscopy will almost always establish whether or not the stomach is the site or origin of the haemorrhage. Furthermore, the demonstration of chronic atrophic gastritis will indicate that there is no duodenal ulcer.

(g) Duodenal Ulcer

A clinical diagnosis of duodenal ulcer confirmed radiologically is sufficient. Gastroscopy is not indicated. Beware, however, of the patient over sixty years of age who presents with haematemesis after a long history of duodenal ulceration. Acid secretion tends to decrease with the passage of the years and the deformed duodenal cap may represent an old healed duodenal ulcer. Gastric ulceration may be the source of the haemorrhage and if the ulcer is placed high on the posterior lesser curvature, as it is in a proportion of men and no less than 80% of women (Swynnerton & Tanner, 1953). gastrectomy may tragically leave the bleeding lesion untouched. A Pouchet extension of the gastrectomy, or similar modification, avoids this disaster. Such cases therefore, should always be gastroscoped.

The demonstration of hypo- or achlorhydria in a patient presumed to suffer from duodenal ulcer calls for gastroscopy as the true diagnosis in such cases is usually gastric ulcer or carcinoma.

(h) Uncommon Gastric Disorders

This is not the place for a description of the rarities of gastric pathology. Suffice it to say that information gathered by gastroscopy is almost always a valuable addition to the knowledge gained clinically and radiologically.

Finally we know that in the treatment of many diseases — thyrotoxicosis, hypertension, ulcerative colitis and peptic ulceration are good examples — the very best results can only be obtained by close collaboration between physician and surgeon. So far as peptic ulceration is concerned, the gastroscope, by providing a common bond of interest, can help greatly to achieve this most necessary collaboration.

Summary

1. The advantages gained by the use of Hermon Taylor Gastroscope are described.

2. The indications for gastroscopy are set out.

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Clinical Pathology

Coronary Artery Atherosclerosis

Preliminary Report on a Simple Laboratory Test that Appears to be of Value in the Detection of Coronary Artery Atherosclerosis

Paul Green, B.A., M.D., F.R.C.P.(C.)
Valerie Cantion, R.T.

During the past few decades there has been a great interest in the problem of coronary artery disease. Evidence of this interest is to be found in the copious medical literature on the subject. Little has been added to the clinical features of the problem. Much work has been done on its etiology and pathogenesis.

Atherosclerosis is a poorly diagnosed disease or group of diseases. The reason for this is that it is only by its complications (such as myocardial infarction, cerebral arterial thrombosis; peripheral arterial insufficiency) that its presence can be suspected and inferred. It is obvious that if these complications are required before it can be diagnosed, then diagnosis must be made very late in the course of the disease in most cases.

It might, therefore, be of some advantage if it were possible to suspect the presence of atherosclerosis before the complicating features developed and, possibly, in that way to attempt to arrest or reverse this disease.

It is with some experiments on the early diagnosis of coronary artery atherosclerosis that this paper proposes to deal.

The Chloroform Precipitation Test

Our interest in this problem arose in 1950 when we observed that when serum is shaken with chloroform a precipitate forms. It turned out that this was not a new observation, for in 1915 Minot had studied the effect of chloroform on blood clotting, as it had been observed that chloroform could initiate the clotting of plasma. Sevag had used a mixture of chloroform and amyl alcohol to remove proteins from solution by prolonged shaking of the solution with the mixture. However, we were unable to find any systematic study of the effect of chloroform on the serum of different individuals. The following simple method was devised:

Blood is taken from an individual in the fasting state, and the serum is separated from the clotted blood. Into a large Coleman spectrophotometer colorimeter cuvette is measured 8.0 ml. of 0.85% saline. 0.05 ml. of serum is added from a Kahn pipette, and then 0.2 ml. of chloroform. The tube is stoppered with a rubber stopper and is placed in a Kahn mechanical shaker, shaking at the rate of four times per second. The tube and contents are shaken for two minutes. The tube is then removed and set upright, still stoppered, in a rack and allowed to stand for about twenty minutes. The chloroform settles to the bottom of the tube leaving a milky opalescent supernatant. The opacity of this supernatant is then measured in the Coleman Spectrophotometer by setting it to 100% transmission with a blank of serum and saline, using a wavelength of 520 mu. The optical density x 100 is arbitrarily considered to be the number of units of turbidity of the solution. It was soon apparent that this fraction (CF) was related to the serum lipoproteins. However, it was only roughly proportional to the cholesterol content of the serum, or to the total serum fat, and could change independently of either of these fractions. There has been a great interest in the relationship between coronary atherosclerosis and serum lipids. For a long time it has been recognized that individuals with hypercholesterolemia are more prone to coronary artery disease than are individuals who have low serum cholesterol values. However, the serum cholesterol is not inevitably elevated in those with myocardial infarcts. Golfman and his colleagues have shown that there is a relationship between some of the lipoprotein fractions that can be separated from serum in the ultracentrifuge (much like the old cream separator) and coronary artery disease. We were able to obtain a few sera from the ultracentrifuge laboratory in Montreal, and Golfman's atherosclerotic index, as determined on these sera by ultracentrifuge, gave reasonably good correlation with the results of the CF.

A number of apparently normal individuals were taken, and it was found that the apparent normal range of the CF was 14-25 units, with a mean of 19 units.

The Steady State

As measurements of CF were made a few impressions were consolidated. The first was that each individual, in the healthy state, has a level of CF that tends to be constant; that is apparently healthy individuals who had a high CF tended to maintain the high CF, whereas those with low or normal levels tended to remain the same range. Three examples are shown in Table I:

Table I

	1951	1952	1953	1954	1955
Case 1	43 units	46	42	68	47
Case 2	48	—	54	46	—
Case 3	24	16	17	21	17

The other observation was that this level is sensitive to disease processes in the individual. It is universally recognized that other blood constants are sensitive to such changes; for example, the erythrocyte sedimentation rate; but there does not seem to be the same awareness that serum cholesterol for example, is also sensitive in the same way.

Selye has noted that a drop in serum cholesterol level is part of the so-called alarm reaction. Turner and also Golfman have taken it into consideration in their work. Others, however, have not done so and attempts to correlate post-mortem findings with blood levels taken in moribund patients or even in post-mortem blood are reported, but are of very dubious value.

On the experimental side there are reports that confuse the issue. This is due to the fact that rabbits and other herbivores have been used for experimentation, and these animals respond to various stresses by producing hyperlipemia; just the opposite from humans.

In table II is tabulated data on three individuals: one who had a hernia repaired, and the other two who had myocardial infarctions.

Table II

A. Hernia Repair

Date	Cholesterol	CF
-1	162mg%	21U
x1	150mg%	21U
x2	120mg%	19U
x3	116mg%	16U
x4	120mg%	14U
x5	125mg%	14U
x8	150mg%	16U
x10	155mg%	16U

B. Infarct

Date	Cholesterol	CF
8/1/47	340mg%	----
8/10/47	263mg%	----
28/8/48	260mg%	----
12/3/54	265mg%	67U
6/8/54	Infarct	
11/8/54	174mg%	55U
13/8/54	164mg%	42U
24/11/54	205mg% mild failure	36U
8/12/54	195mg%	26U
9/2/55	210mg%	39U

C. Infarct

Date	Cholesterol	CF
1953	220mg%	43U
27/10/54	Infarct	
3/11/54	125mg%	14U
10/11/54	----	12U
17/11/54	145mg%	11U
24/11/54	170mg%	12U
1/12/54	195mg%	17U
8/12/54	150mg%	31U
15/12/54	160mg%	27U
14/1/55	195mg%	36U

Control series run on patients given anticoagulants who were not acutely ill, and in some well patients, followed over a number of days do not show very wide fluctuations.

It is apparent, therefore, that in order to determine what is the normal level for an individual of either cholesterol or CF one must obtain samples of either before they are ill, or after they have recovered from the effects of the illness and reached what Golfman has called the "steady state".

Myocardial Infarction

Because some known factors tend to produce myocardial infarction, (hypertension and diabetes), we have taken as the total group those individuals with myocardial infarction as evidenced by clinical and electrocardiographic changes, and have subdivided them into:

(a) Hypertensives: If the clinician in charge of the case had labelled them as hypertensives.

(b) Diabetes.

(c) Those with neither diabetes or hypertension.

The results on a number of these individuals are tabulated in Table III. The age given is the age at which the first myocardial infarct appeared. In most of these cases the results are expressed in terms of the "steady state". However, some cases terminated fatally, and in those cases the result is followed by "x" which indicates that the tabulated result was the first measurement made following the infarction. The assumption is that in the steady state the value would have been greater.

Table III

Hypertensives

A. No Infarction to date

Age (Years)	Cholesterol mg%	CF Units
27	172	20
35	225	44
35	164	24
32	----	47
38	160	19
40	----	22
47	----	26
48	152	15
48	237	27
55	158	10
58	240	27
59	200	24
59	275	59
59	164	32
60	170	21
60	----	54
60	130	19
60	----	15
66	165	14
66	----	14
71	----	20
72	190	28
83	----	9

B. Infarction

Age (Years)	Cholesterol mg%	CF Units
41	200	52
50	210	32
53	185x	35x
56	245	59
56	----	39
58	----	40
58	205	22
60	145	20
60	260	67
63	180	23
64	205	54
65	182	40
68	160	14
72	225	34
72	190	21
70	----	16
70	----	34x
85	220x	27x

The incidence of raised CF's in the hypertensives without infarct was nine out of 23; 4 out of 15 had cholesterols over 225mg%. This is a greater incidence than "normals" where 3-5% have CF's above the designated normal limit.

In hypertensives with infarction 12 out of 19 had elevated CF fractions and 3 out of 14 cholesterol levels above 225mg%.

Diabetics

No Infarction

Age (Years)	Cholesterol mg%	CF Units
30	----	44
30	225	35
33	185	36
33	187	21
34	190	28
35	155	14
38	102	21
44	----	41
45	----	17
54	170	14
55	----	35
58	----	33
62	195	17
65	----	28
68	----	30
73	----	14
73	166	18
80	----	11
85	210	21

Infarction

Age (Years)	Cholesterol mg%	CF Units
65	----	35
70	235	52

Nine out of 19 diabetics without infarction had elevated CF values. Both of those with infarcts had elevated values.

Infarcts Without Hypertension or Diabetes

Age (Years)	Cholesterol mg%	CF Units
31	----	75
32	220	70
40	210	54
41	----	34x
41	200x	36x
44	267x	30x
44	205	36
46	275	60
52	----	65
54	270	50
54	210	39
55	260	55
56	155x	33x
57	----	59
58	165	85
59	----	40
60	305	38
62	215x	41x
62	170	45
62	----	11
62	----	22
63	175	50
63	237	62
73	165	55
79	----	12
80	----	48

In this group the striking thing is that only 3 out of the 26 had normal CF levels. Six out of 17 had cholesterol levels above 225mg%. All cases with infarction before age 60 had elevated CF levels.

CF in Other Diseases

In patients with advanced chronic disease such as malignancy, tuberculosis, rheumatoid arthritis, low cholesterol and CF levels tend to be found. In acute infectious hepatitis the values are elevated early but drop to normal as the infection progresses. In cirrhosis of the liver usually normal or low values were found. In obstructive jaundice high values were not infrequent.

All cases of myxedema had high values whereas in hyperthyroidism the values were low. All cases of the nephrotic syndrome had elevated levels, and many cases of chronic nephritis in the absence of the nephrotic syndrome.

Many patients with partial gastrectomy had low levels.

Discussion

From the data presented here we have felt that the conclusion is justified that patients who have had a myocardial infarction will show an elevated CF level when they have recovered from the effects of that infarction. This is particularly so in the absence of hypertension. The question that naturally arises is: Will individuals who are found to have an elevated CF fraction run a greater risk of developing myocardial infarction than those who do not? As many cases as possible are being followed to try and answer this question. So far four individuals in whom elevated CF levels were found on routine examination have had their first infarct. None of the normal, non-hypertensive group has as yet developed myocardial infarction. However, many of the individuals with high values have not, as yet, developed infarction either. The finding of individuals in the 7th decade with high CF levels and no myocardial infarction would suggest that either an individual can carry on for a long time with elevated levels and not have an infarct, or that something has occurred in that individual which has produced an elevation of the fraction. Diseases such as hypothyroidism, nephrotic syndrome can apparently produce such a result.

No conclusions can be drawn from these data as to the etiology of atherosclerosis. Abnormal lipids in the blood do not necessarily mean that these lipids are the cause of atherosclerosis any more than the elevation of blood sugar in diabetes necessarily means that the hyperglycemia is the cause of the diabetes.

Our experience with other manifestations of vascular disease, such as cerebral artery thrombosis, and peripheral arterial occlusions is very limited. However, in the few cases that we have studied there does not appear to be anywhere near as close an association with elevation of the CF as there is in myocardial infarction.

Summary

A simple laboratory test is described that appears to be of value in the diagnosis of coronary atherosclerosis. Clinical experience with this test has been described.

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*Stieglitz, E.J.: J.A.M.A. 142:1070 (Apr. 8) 1950.

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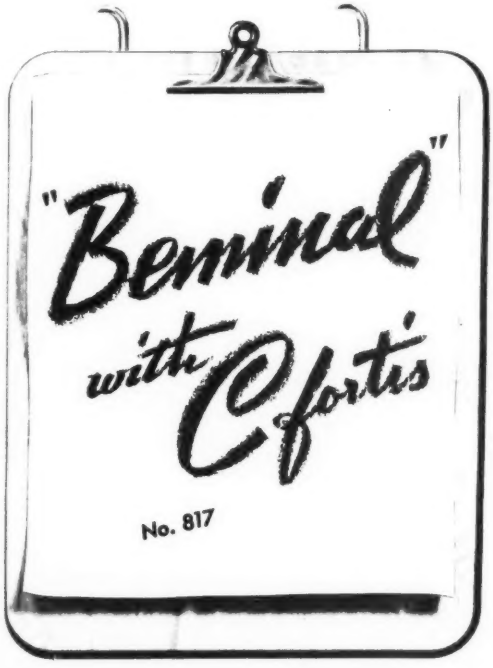

*After surgery, the need for vitamins (particularly the water-soluble) is increased fivefold. "Patients who received vitamin B complex and C had a much smoother and more comfortable post-operative course than those patients who did not."**

*Malloy, H. R.: J. National Med. Assoc. 42:140 (May) 1950.

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Dermatology

The Office Treatment of Acne Scars

S. S. Berger, B.A., M.D.

It has always been a source of great distress to the skin specialist to tell his acne patients that the scars of the disease would persist. Today, the dermatologist can treat acne scars as an office procedure with results that most patients find gratifying. The dermatologist employs the method devised by A. Kurtin, a skin specialist from New York City. Kurtin calls his procedure 'Corrective Surgical Planing of Skin'. It has also been called 'Dermabrasion'.

The Kurtin technique consists of directing a current of air from a mounted blower on the area of skin to be treated, while at the same time a coarse spray of Ethyl Chloride is also directed on the same area. The current of air accelerates evaporation and consequent freezing. Freezing occurs in a few seconds. Approximately three square inches are frozen at one time. An area this size is treated individually and is adequately treated before thawing begins.

Instead of employing sandpaper, the skin is abraded with a motor driven wire brush. The frozen skin is insensitive and bloodless. It provides a rigid surface that gives sufficient resistance to the abrading instrument. A motor driven wire brush is very fast in its abrasive action and it can be selectively applied to small areas of the skin. The rotating wire brush is moved across the skin at right angles to the plane of the brush. While planing, one holds the hand piece of the abrading instrument the way one holds a safety razor and one moves the brush from top to bottom in short downward strokes as in shaving.

Pre Operative Care

(1) The patient is instructed to wash the face for one week prior to the operation with Phisohex soap to cleanse the skin as much as possible of bacteria.

(2) Males are instructed to shave before the operation.

(3) All cosmetics are removed.

(4) In order to minimize the initial freezing sensation which a patient feels for a few seconds before freezing from Ethyl Chloride occurs, the face is prechilled before using Ethyl Chloride. To the face is applied a special plastic ice pack containing 5% propylene glycol in water which chills without hardening in the freezing compartment of the refrigerator. The pack is kept on the face for about twenty minutes and then the face is cleansed with alcohol.

(5) Cotton is used to plug the nose and ear orifices to protect accidental spraying of these areas. An assistant protects the eyes with gauze.

Post Operative Care

For about twenty minutes after thawing of the Ethyl Chloride, there is a slight oozing of blood and serum during which time the face is covered with gauze packs. Then a Telfa dressing is applied to the face and gauze is applied over the dressing. Telfa is the new type of nonadherent dressing for all wounds. "It keeps wounds dry without sticking. It consists of a non wettable perforated plastic film firmly bonded to a highly absorbent non woven material of 100% pure cotton. Wound drainage is absorbed through perforations in plastic non wettable film placed next to the wound. By virtual pumping action of highly capillary absorbent cotton backing, perforations are large enough to allow full absorption, small enough to exclude tissue butts". Telfa is an ideal post operative dressing for the patients treated for acne scars, as it absorbs without sticking.

In twenty-four hours all dressings are removed by the patient and the treated areas allowed to dry by exposure to air. No other dressing is allowed. Post operative infection is not a factor and the use of antibiotic ointments is not necessary. Epithelialization is complete in six to eight days.

The patients are told to soak off the dry adherent crusts with warm water on the eighth day. Men may start shaving again at this time. Soap washings, medications, and cosmetics are allowed after the eighth day. The patient is told to avoid direct exposure to the sun for a few months. A sun protection cream may be used.

Further Considerations

The number of retreatments depends on the operator and the patient. Some dermatologists abrade rather deeply and often achieve satisfactory results with one abrasion. Also the type and depth of the scar will determine if more than one operation is necessary. Retreatment is done in four to six weeks.

Blau and Rein who reported a series of 420 cases of dermal planing have seen no post operative infection or keloids. They state also, "From the histopathologic point of view, dermabrasion whether accomplished by rasps, sandpaper or motor driven wire brushes is similar to the surgically performed Ollier-Thiersch split-skin graft." They further explained that the acne pit is a scar in and around the pilosebaceous unit. The technique described in this paper removes pits and pilosebaceous units by the motor driven wire brush.

The wire brush method is preferable to the sandpaper abrasion of the skin. Firstly it does not require a general anaesthetic. Aside from the risks involved with a general anaesthetic, the

inhalator apparatus interferes with treatment of the face. Also, as Kurtin points out, "Sandpaper presents a relatively broad surface which makes it difficult to treat irregular contours and does not permit differential abrasion of adjacent areas. The possibility of silica granulomas caused by small buried particles must be considered as a calculated risk."

Dr. Carrol Wright in a discussion of Blau and Rein's paper states "Every patient we have treated has been pleased with the improvement. We have had no complaints about the results and undesirable sequelae." Blau and Rein sent out a questionnaire to physicians who have had experience with the Kurtin method. A total of 2,206 cases had been followed for a sufficient period of time for evaluation. With extremely few exceptions, the results were very satisfactory.

Summary

(1) The Kurtin technique for the office treatment of acne scars has been described.

(2) Pre, and post operative care was outlined.

(3) The histopathologic mechanism of dermabrasion by motor driven wire brushes was briefly explained.

(4) The advantages of the Kurtin procedure over sandpaper was discussed.

(5) Mention was made of reports which indicate that patients are more than satisfied with their results achieved by this office procedure of removal of acne scars.

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Bacteriology

Virus Encephalomyelitis

J. C. Wilt, M.D., and F. J. Stanfield, A.I.M.L.T.

During the summer and early fall of 1954, many patients with clinical symptoms suggestive of aseptic meningitis, virus encephalitis or non-paralytic poliomyelitis were seen throughout the Province of Manitoba. Many of these infections were diagnosed clinically as poliomyelitis, possibly as a reflection of the two major epidemics of poliomyelitis in Manitoba in 1952-1953.

The syndrome of aseptic meningitis may be produced by infection with any one of a number of different viruses, which by the character of the disease they produce, may be divided into two groups: one group of viruses is associated with sporadic infections, and the second group with epidemic disease. Epidemic neurologic viral disease in Manitoba includes poliomyelitis, western equine encephalitis and coxsackiosis. Sporadic neurologic viral diseases include mumps, herpes simplex, herpes zoster, varicella, measles, infectious mononucleosis and infectious hepatitis. In the latter group, disease of the central nervous system is a relatively rare complication of the primary infection, i.e.: mumps encephalitis in a case of mumps parotitis. These secondarily neurotropic viruses may produce encephalitis or meningitis during the course of the primary infection by spread of virus to the brain and meninges. In these cases, virus may be isolated from these sites in autopsy material. The encephalitis or myelitis however, may follow the primary infection by an interval of one to three weeks. This post infection encephalitis is occasionally seen following vaccination against such diseases as smallpox or rabies. The pathologic picture is one of acute demyelination. The relationship of the demyelination to the primary virus disease or vaccination is not known. It is extremely difficult and in most cases impossible to isolate virus from the central nervous system in these cases. For this reason an enzyme and an allergic theory have been postulated.

It is impossible to be certain of the etiology of a particular case of aseptic meningitis from clinical examination only. One can, however, be reasonably certain of the etiology of a particular neurologic virus disease when an epidemic exists in the area, i.e., the diagnosis of non-paralytic poliomyelitis when many cases of paralytic poliomyelitis are occurring in the community. The etiology of a sporadic neurologic disease is more difficult since one does not have the diagnostic aid of a co-existent epidemic. In some cases the etiology of the secondary complication may be diagnosed by the existence of a straightforward primary disease, i.e., mumps encephalitis with mumps parotitis. Many cases of mumps encephalitis or meningitis occur however, without manifestations of mumps parotitis. This probably holds for the other sporadic secondary neurotropic virus diseases as well.

In 1948 Dalldorf and Sickles inoculated suckling mice with a suspension of human faeces obtained from patients who lived in the town of Coxsackie, New York. The mice subsequently became paralyzed. The virus is now known as the Coxsackie virus and is readily identified by the paralysis and the destructive lesions of the striated muscles in mice inoculated with faeces containing the virus: these specific effects are not produced by any other known virus.

On the basis of distribution of lesions in newborn mice the Coxsackie viruses are divided

into two groups, "A" and "B". Group "A" viruses produce a diffuse myositis (fig. 1) in the skeletal muscles of the inoculated mice; Group "B" viruses produce a focal myositis (fig. 2) and also give rise to a fat necrosis, most marked in the inter-scapular fat pads (fig. 3.). Pancreatitis, myocarditis (fig. 4) and encephalitis may also occur with Group "B" virus infections in newborn mice. At least 12 different serologic types of Group "A" Coxsackie viruses have been identified; four serologic types comprise the Group "B" Coxsackie viruses. These 16 types of virus are identified by serum neutralization tests carried out on newborn mice.

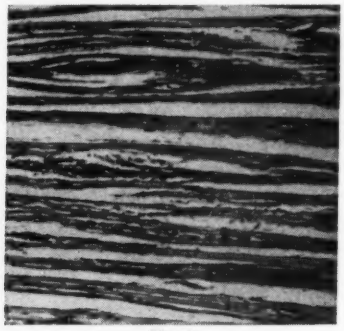

Fig. 1
Diffuse myositis X 75. H. & E. Stain.
Back leg of 4 day old mouse.

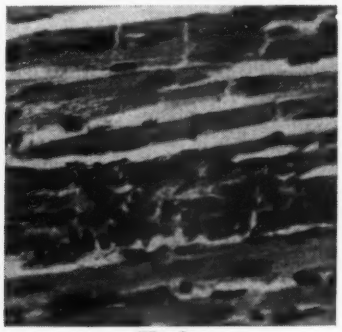

Fig. 2
Focal myositis X 350. H. & E. Stain.
Back leg of 8 day old mouse.

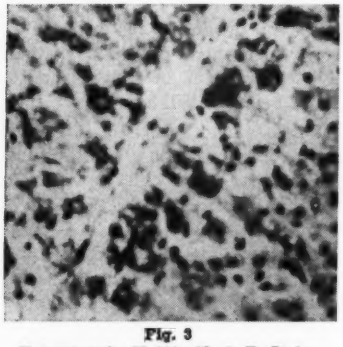

Fig. 3
Fat-necrosis. X 350. H. & E. Stain.
Interscapular fat pad 8 day old mouse.

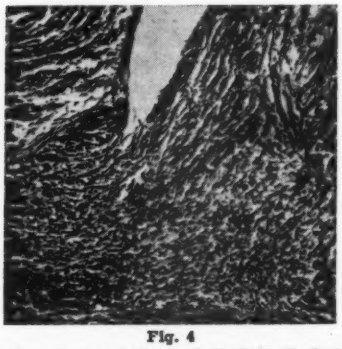

Fig. 4
Lesion of myocardium .X 75 H. & E. Stain.
Left ventricle 8 day old mouse.

Diseases in human beings resulting from infection with Coxsackie viruses have not been completely identified, but at least four fairly well defined syndromes have been described.

Infection with Group "B" Coxsackie viruses may be followed by an aseptic meningitis. The onset of this disease is characterized by fever, malaise, headache, nausea and abdominal pain. Twenty-four to forty-eight hours later, stiffness of the neck and back occurs, and vomiting develops. An increase of the cerebro-spinal fluid protein and a pleocytosis occurs up to 100 cells per cu. mm. In the early stages of the disease the cells are predominantly polymorphonuclear leucocytes; during the later stages lymphocytes predominate.

Pleurodynia (Epidemic Myalgia or Bornholm Disease) may also result from infection with Coxsackie viruses of Group "B". The syndrome in the initial stage of the disease consists of fever, malaise and anorexia; in twenty-four to forty-eight hours the main symptom is lateral or substernal thoracic pain which may persist from forty-eight hours to two weeks. In approximately fifty percent of cases of pleurodynia, abdominal pain is present.

Herpangina may follow infection with the Group "A" Coxsackie viruses. The onset of the disease is abrupt with fever, sore throat, anorexia, vomiting and in the majority of cases, abdominal pain. Discrete vesicles may be seen on the inflamed tonsils and pharynx.

A fourth ill-defined syndrome associated with Coxsackie virus infection has been designated summer minor illness. The symptoms of this illness, which as a rule is confined to children, include sore throat, with an accompanying fever and vague abdominal pains.

These four recognized syndromes resulting from infection with Coxsackie viruses occur during the spring, summer and autumn months. The infections are all benign and are generally followed by complete recovery. The duration of symptoms usually is from twenty-four to forty-eight hours. Children are most commonly affected, which would suggest that a large part of the adult population has been exposed to Coxsackie virus infections in childhood and has developed an immunity with or without symptoms of disease. Also in favor of this hypothesis is the presence of antibodies to the Coxsackie viruses in the serum of the majority of adults.

During the summer of 1954, one hundred and four specimens of faeces were submitted to the Virus Laboratory in the Medical College to be examined for the presence of Poliomyelitis virus. A short history of the illness was submitted with each specimen and in each case a tentative clinical diagnosis of Poliomyelitis had been made. In twenty-three instances Type I Poliomyelitis virus was isolated.

Sixty-six specimens from which Poliomyelitis virus could not be isolated were later examined for the presence of Coxsackie virus. Coxsackie virus was isolated from nine of these sixty-six specimens. Five of the nine were Group "A" and four Group "B".

This is not absolute proof for the diagnosis of Coxsackiosis in these nine patients, since Coxsackie virus can sometimes be isolated from the faeces of persons in normal health, presumed to be temporary carriers of the virus. In all probability the disease in some of the nine cases was produced by the Coxsackie viruses. Proof of this in any particular case however, would depend upon the demonstration of a rising antibody titre by the examination of two blood specimens, the first taken early in the disease and the second two weeks later.

Material to be submitted from a case of Aseptic meningitis which could be due to the Coxsackie viruses would include:

1. Two (2) blood samples, the first to be collected and submitted at the beginning of the illness; the second two weeks later.

2. Two (2) faeces specimens. Specimens to be collected on two consecutive days at the onset of the illness.

All specimens to be despatched to the Laboratory immediately after collection to the following address.

The Virus Research Laboratory,
126 Medical College Buildings,
Emily and Bannatyne,
Winnipeg, Manitoba.

Case Report

Carcinoma of the Stomach Diagnosed by Gastroscopy

A. J. Glazebrook, M.D.*
and
Peter Shelton, M.D.

The following case is reported to draw attention to the importance of gastroscopy.

Case Report

A 58 year old man complained of the loss of 42 lbs. in weight and pain in the left side of his abdomen. The weight loss had begun 2 years ago. The pain had been present for one year. It had a diffuse location between the left costal margin and the left iliac crest, but did not radiate. It was aggravated by breathing and sometimes by food, but was relieved by recumbency in bed at night. Until recently the pain had never been severe; but for four weeks it had become worse and more constant.

Upon examination the man looked pale, ill, and thin. No definite physical signs were discovered. His haemoglobin was 59% with 3.1. million red cells. His blood sedimentation rate was 76 mm. in the first hour. Occult blood was found in his stools on one occasion. He had no free acid in his stomach.

Malignancy was suspected and strenuous efforts made to find the primary source. Two barium meal examinations of the stomach and duodenum did not show it, and the stomach and duodenum on the second check with spot films were reported as normal. Two cholecystograms were done; the spine was examined; a chest film was exposed; A.P. and left lateral plain films of the abdomen were repeated twice; a retrograde pyelogram was carried out. The pancreas became suspect, and blood amylases were estimated. The man was admitted to St. Boniface Hospital and gastroscopy was done 14 days after the second of the two barium meals mentioned above.

Gastroscopy Report. (A.J.G.). A large ulcer is seen on the lesser curve, immediately proximal to the angulus. Its full size and extent cannot be determined with the limited view given by the Cameron gastroscope, but whitish tumour masses are seen projecting. Diagnosis: malignant ulcer of the stomach.

Laparotomy Report. There is a huge ulcerating lesion on the lesser curvature with involved nodes

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along the left gastric artery and the right gastro-epiploic vessels. Total gastrectomy performed.

Pathology Report: There is a large mass straddling the lesser curvature, extending from the oesophagus to 8 cms. from the distal end of the stomach. The mucosal surface presents an ulcer measuring 8cms by 8cms with raised rolled edges, and a necrotic base. Sections reveal an infiltrating carcinoma. The mesenteric lymph nodes are free of metastases.

Discussion

Sometimes quite large lesions can be missed by competent radiologists and diagnosed by gastroscopy, and this case is a good example. But lesions can be seen with the gastroscope which are not visible on radiology, even with the most protracted and careful technique. One author (A.J.G.) remembers a case in Chapel Allerton Hospital, Leeds, where a man with a so-called functional dyspepsia and negative barium meal examinations was observed to have an oedematous area with petechial haemorrhages on the lesser curvature of the stomach. This area was watched with the aid of a Hermon Taylor gastroscope for six months. Ulceration developed in the area in spite of the continuing disbelief of the radiologist, finally the consulting surgeon was invited to peep down the gastroscope; he quickly decided on a laparotomy and the resected portion on stomach contained a benign ulcer measuring 3cms in diameter.

The radiology report may even be misleading. A medical student was admitted to the wards of Guy's Hospital in London under his own Chief for treatment of haematemesis. Three barium meals were done and a report of a "deformed duodenal cap" led to a diagnosis of duodenal ulcer. Suspicions that this diagnosis was wrong developed because of the recurrence of slight bleeding in spite of hospital ulcer treatment; and some dispute as to the management arose, the Physician insisting on his diagnosis of duodenal ulcer on the basis of X-ray studies. Eventually another opinion was sought, gastroscopy was ordered, and a tumour of the stomach seen. Gastric resection revealed a leio-myoma involving the antrum; there was some doubt regarding the benignity of the mass but the young man is now seven years older and a doctor. He is sure of two things; the reality of the post-gastrectomy syndrome and the value of the gastroscopy. Nothing in this paper should be taken as critical of radiology; all diagnostic techniques have their limitations, and many lesions have been missed on gastroscopy and found on X-ray examination. The gastroscopist is not the rival of the radiologist; their techniques are complementary and their close association must lead to earlier and better diagnosis. But gastroscopy, like radiology, cannot be learned overnight; neither can it be well performed if an unsatisfactory gastroscope is employed. A gastroscope with a controlled flexible tip such as the Hermon Taylor is essential for proper viewing. Finally the gastroscopist must have the knowledge of experience; he cannot supply this if his services are not utilized.

Summary

A large carcinoma of the stomach was seen by gastroscopy two weeks after the second of two barium meal examinations had failed to reveal it. The value of gastroscopy is discussed.

Abstracts from the Literature

Oxygen Studies in Retrolental Fibroplasia: IV. Clinical and Experimental Observations. A. Patz., Am. J. Ophth., 38: 291-308, 1954 (Sept.)

Between July, 1948 and December, 1951, a striking correlation was found between the number of days of oxygen therapy and the incidence of retrolental fibroplasia. From January 1953 to May 1953, a controlled study was instituted on an alternate admission basis. Premature infants under 3 pounds 8 ounces were placed in a high oxygen group (60% - 70% oxygen for 28 days or more), or in a restricted oxygen group (under 40% oxygen). Twelve of 60 infants in the high oxygen group developed advanced retrolental fibroplasia. Only one of 60 in the curtailed oxygen group developed advanced disease. The difference is significant. Other data indicate that retinal vaso-constriction is probably fundamental in the development of retrolental fibroplasia. The clinical and experimental data justify the recommendations that oxygen therapy be rigidly curtailed in the premature nursery and its overuse cautiously avoided to insure this; the medical and nursing staff should be indoctrinated to the dangers of oxygen overusage; except for emergencies oxygen therapy should require a specific order; every nursery should be equipped with an oxygen analyzer; oxygen therapy should be ordered by concentrations rather than flow rate; oxygen concentrations should be measured and recorded at least once daily.

A. G. Rogers.

Editorial

S. Vaisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor

Medical History

History is Bunk.

Henry Ford.

Tracing man's progress through the ages, Professor V. Gordon Childe in his book, "Man Makes Himself", lists nineteen basic discoveries and applications of science: artificial irrigation, the plow, harnessing of animal power, sailing boats, wheeled vehicles, orchard husbandry, fermentation, production and use of copper, bricks, the arch, glazing, the seal, a solar calendar, writing, numeral notations, bronze, smelting, iron, the alphabet, and aqueducts for urban water supply. The list is impressive, but, as can be readily seen, it contains no reference to anything even remotely connected with medicine. No mention is made of the discovery of healing and pain relieving properties of herbs, or the invention of the first surgical instrument, as if the fight against disease was of no consequence to man and his development. This omission, incomprehensible as it may be to the medical reader, is only one example of the attitude to medicine taken by many, if not most, historians, who fail to record and interpret the important and, at times, decisive part played by disease and the struggle against it, in the annals of mankind. This attitude does not stem from any conscious intent on their part to belittle or ignore important facts, but rather from a basic orientation. Historiographers are men whose feet are planted deeply in the humanities. Their minds are slanted towards philosophy, politics, literature, art and the pure rather than applied sciences. As a result they have a blind spot in their visual fields to the role of disease and medicine in the history of nations.

Should history, then, be written by doctors? It would, indeed, be fun! Filtered through the medical mind, the emphasis would at once shift from kings, emperors, statesmen, and warriors, to physicians and surgeons, bacteriologists, physiologists, from economics, politics and military strategy to mass epidemics, and mass psychoses. Viewed through the medical eye, many historic personages would be seen in a different light. Caesar would be remembered for his epilepsy, Cleopatra for her glandular overactivity, Napoleon for his gastric condition.

Attractive as the prospect of World History written by doctors may appear to us, it is doubtful whether it would appeal to the lay reader, who would probably find it somewhat unusual and not a little depressing. Let us, then, leave World History to the professional historian and turn our attention to the province of the realm of history, which is closest to our hearts — the history of medicine.

Should Medical History be written by doctors or by professional historians? Is it a branch of History or a department of Medicine? The answer to these questions is by no means easy. Both laymen and medical men have tried their hand at Medical History. Friend, Garrison, Major and many other writers of standard texts were physicians. Shryock, the writer of "The Development of Modern Medicine", is a lay sociologist and historiographer. By and large, however, it is the doctor who to date did most of the recording and interpretation of the history of his profession. Being on the "inside", so to speak, he is in better position to sift historical evidence, and find continuity, where an outsider would see only isolated phenomena. On the other hand he is lacking in perspective when trying to set out medical events against the background of their times, to link them with the daily lives, religious beliefs, social customs and economic conditions. On the whole, however, he acquits himself well.

Having dealt with the question of who is to write medical history, we find ourselves faced with a more important problem of who is to read it. It is an open secret that texts of medical history, readable and interesting as they may be, are not best sellers. Indeed they are notorious dust gatherers on shelves of medical libraries. Why this lack of appeal? Is it because, having channelled his interests early in life to natural sciences, the medical man has divorced himself forever from the humanities? Or is it because he is too immersed in the present to be bothered with the past? These are hardly the correct explanations, for many physicians who know very little of the history of their own profession, are well versed in world history. They know all about Caesar, but nothing about Celsus. They can tell you a great deal about Calvin, but very little about Servetus. Whence this paradox?

The answer, probably, lies in the firmly entrenched notion that nothing worth while has been achieved in Medicine before the nineteenth century. A poet of today can find pleasure in reading the Song of Songs of Solomon, written 3,000 years ago, a modern sculptor will be enthralled by statues of Ancient Greece, a present day philosopher will read Aristotle and Spinoza with absorbing interest. All of them find eternal values in the works of their predecessors, who speak to them across the centuries in the language of today. The sonnets of Shakespeare, the paintings of Botticelli, the psalms of David have not been tarnished by time.

Can the same be said about the doctrines of Galen, the tirades of Paracelsus, the theories of Van Helmont, the mysticism of Van Stahl? Does the physician of today speak the same language as his counterpart of but two centuries ago? The answer that many, if not most, of us will give to these questions will, probably, be in the negative. To many the writings of our predecessors would appear to be replete with superstitions and idle speculation, and hardly deserving of serious consideration.

Is this attitude of amusement, condescension or even revulsion to our medical past justified? Or is it a product of immature thought and superficial approach? If we were to regard Medicine as a natural science, then, perhaps, we would have to concede a degree of justification to the negative approach to medical history, for there is very little, indeed, of lasting scientific values in old medical writings. But then, of course, Medicine is not a natural science. It is much more than that. It is a complex profession whose broader aspects embrace psychology, sociology, personal relationships, economics, law, ethics, philosophy and creative imagination. If we are to think of Medicine in these broader terms, we must adopt a more positive attitude to History of Medicine. Moreover, Medicine is not a static being, but a dynamic becoming. Trends and ideas of today have their origins in many yesterdays. If Medicine is a growing tree with many branches, then the roots are important.

Of what practical value, then, is Medical History to the physician of today? The question must be stated in these blunt terms, because the average doctor is not an antiquarian who is fond of the past solely because it is the past. The modern physician values the past, whether it be that of yesterday or of a thousand years ago, only if it contributes in a constructive way to the present. What are these constructive contributions?

First, there are the practical uses in the narrow sense of the word. Old techniques, methods and tools, used and then forgotten, may occasionally be salvaged and put to good use. Conversely, discoveries and inventions, presumably new, may be found to have been tried before and proven wanting. Errors and pitfalls may thus be avoided, and the investigator spared time, effort and the inevitable frustration.

More important than the strictly utilitarian aspects related to techniques and methods, are those concerned with ideas. Old theories may be revived, and successfully applied to present day problems, for even though ours is the age of observation and experiment, there still is room for speculation and creative imagination. Obversely, seemingly new ideas may be found to have been justly descredited in the past. Indeed, history is littered with corpses of grandiose theories, and all-embracing systems. These may serve as warnings and deterrents to modern enthusiasts prone to dogmatic assertions and sweeping generalizations.

The main value of history to the doctor, however, lies in the contribution to self-knowledge as well as knowledge of the patient. The latter is important because we treat patients and not diseases (a statement rendered somewhat trite by repetition) and consequently we must base our practice on the knowledge of man's development, origins and ideas; his social, economic, political and religious patterns through the ages. Self-knowledge is essential, for knowing one's self means knowing what one can do, and the only clue to what one can do is what one has done. This is precisely what history tells us. It also teaches us indirectly, by implication and example, the inspirational value of great guiding principles. Abused and ignored as they often may be, they still form the basis of Medicine.

It is on this serene and solemn note that these rambling reflections should, by all rules of good composition, be brought to an end. The climax having been reached, what else is there to say? Unless, of course, to remind the reader that this is the month of June, the month of mischief and light-heartedness, which scoffs at solemnity. There is a light breeze in the air tickling the ear drum with strange and piquant tales from the past. As it rustles through these leaves, it stops at the page where under the title "Famous Inquests of History" Dr. Athol Gordon regales us with lusty tales of love and murder. Shades of Rabelais, Boccaccio and Balzac! There is also a promise of more good things to come, for in the Department of Medical History of the Review, there will be published under the direction of Dr. J. D. Adamson regular features of historic interest. History can be fun!

It is worth noting that interest in the History of Medicine has been kept alive in this City for many years by the Medico-Historical Society. Its meetings, open to all members of the Winnipeg Medical Society, are held at regular intervals in the Medical Arts Club Room. The latter to date has not suffered from overcrowding. It is hoped however, that as the ranks of interested enthusiasts grow, this state will be attained.—Ed.

Conjoint B.M.A. - C.M.A. - O.M.A. Meeting in Toronto June 20-25, 1955

"If the mountain will not come to Mahomet, Mahomet will go to the mountain."

The season for intensive post-graduate courses in Florida, Jamaica and Hawaii is now definitely over, as it is also for scientific convention cruises to Havana and other exotic places. The Manitoba doctor in quest of knowledge will have to look closer to home for the happy combination of the educational with the recreational and the delectable with the deductible.

Luckily, he will not have to look very far, for he will find that the conjoint meeting in Toronto offers all of these. This may sound paradoxical. Toronto, admittedly, is not Trinidad, nor is Sunnyside Beach — Waikiki. This month, however, the city will partake of the exotic, for in it will assemble medical representatives of distant lands, delegates from all the countries of the British Commonwealth. They will bring with them new ideas, fresh viewpoints and a global outlook.

It is not very often that Canada plays host to such distinguished guests. Since the mountain has come to Mahomet, let us all be there to welcome it.

Ed.

Manitoba's Medical Men XVII. Society for Crippled Children

The executive of the Manitoba Medical Association at the last meeting received a report from the chairman on economics concerning the Society for Crippled Children. As is well known, the Society was established in order to locate, bring to treatment and rehabilitate children who were crippled and whose parents or guardians were unable to provide the necessary medical service. Since its inception, the society has done a wonderful job in helping these unfortunates.

Some members of the profession have become concerned about a trend that seems to be taking place in some matters of policy of the society and are of the opinion that since the society is concerned with indigent patients, that they should have the same medical care as other indigent cases as far as the medical profession is concerned. This would mean that they would be treated in the public wards of the hospitals concerned and that the doctors on the hospital staff would receive no fee for services rendered, and finally that the patients would be used for teaching material as are indigent adults. The society receives funds by public subscription and also from government grants.

The following recommendations were considered by a special committee:

"1. Society of Crippled Children to raise funds as it now does.

2. Social Service function to continue. In this way children eligible because of inability to pay for medical and rehabilitation services would continue to be sought out for examination by travelling clinics in rural areas or in established teaching clinics in the Children's Hospital and continue to pay travelling and living expenses of these patients where indicated.

3. Distribute funds to:

(a) Finance travelling clinics, e.g., pay expenses of doctors while away from home.

(b) Support and improve teaching clinics already established in the Children's Hospital. It is recommended that these Clinics be under the supervision of the hospital authorities and staff. Doctors serving in clinic and ward work would do so without remuneration. Funds required to improve or enlarge these facilities which should be part of a properly organized therapeutic and teaching service should be received by the hospital administration, the hospital board giving proper representation to the Society for Crippled children.

(c) Make available funds for necessary speech and physiotherapists who would be employees of the hospital and paid by it from above funds.

(d) Purchase prostheses and other aids necessary for the care of crippled children.

(e) Form a grant to meet the costs of treating patients on indoor service where Municipal and Government Grants fail to match costs.

By the implementation of such recommendations:

(1) There would be no loss of service to the children.

(2) Reduplication of some services would be avoided.

(3) The patients would again become a source of material for medical students in the out-patient department and indoor services at the Childrens' Hospital.

(4) The services would be rendered by the doctors appointed by the University and the hospital working without remuneration as they do in the case of other special category indigent patients, e.g., patients with cancer in the General and St. Boniface Hospitals.

(5) The following complaints would be eliminated:

(a) Necessity for a member of the Medical Advisory Board of the Society of Crippled Children to review and permit treatment of any patient under its auspice before it is undertaken by a doctor not associated with the Society but chosen by the patient or referring doctor.

(b) That an element of monopoly has occurred that may result in special privileges to those who are associated with the Society."

The Society for Crippled Children is only one of several agencies that has entered the medical arena and it serves as a very good example of a

trend in medical practice in which a group of very public spirited citizens, with the best of motives, is attempting to render a service in which the medical man is the keystone of an arch. Without him the structure would crumble. Thus, it appears that the doctors have been recruited to help not only with the medical aspects, but also to help formulate policy. Many of these policies are made without reference to the whole field of medicine. The chairman of the committee on economics stated that: ". . Certainly it would seem that there has been no effort to include the Manitoba Division in their deliberations as far as the Economics Committee is concerned. This is so different from the negotiations which preceded the establishment of the Cancer Diagnostic Clinics in which the profession, Cancer Institute and Union of Rural Municipalities participated.

If the Manitoba Division feels the doctors' relationship in the Society for Crippled Children is improper or inferior, it should undertake a proposal with the agency to review and perhaps revise it. To restore the status quo no doubt great disruption of their present set up would be necessary; (a) to share the care of their patients in regularly established hospital clinics, with (b) hospital appointed doctors practising without remuneration.

On the other hand, the adoption by agencies of indigent and medically indigent groups may represent the new deal in medical practice. In this way doctors receive recompense for their work and we do not appear loathe to receive it. By this practice government participation is kept at a low financial cost and also to a minimum as far as direction in the care of the poor is concerned. This is not the way it was anticipated doctors would be paid for their services when the Statement of Policy of the Canadian Medical Association was established in 1949. It must now be recognized that there is a new economic factor in Medicine, supported by a sympathetic public and generous Government grants. It would appear that during prosperity it would continue to develop, nurtured well financially and led by able and public-minded citizens. If this is so, it behooves us to have a better informed attitude in these and future developments and not leave our responsibilities to ourselves to casual observers."

The executive of the Manitoba Medical Association is giving this problem careful consideration.

L. A. Sigurdson, M.D.

Medical History

Three Inquests of Historical Interest

Part 1

Dr. Athol Gordon

When invited to present a paper before this society I was at once acutely sensible of an honour conferred and a privilege afforded. One realizes that in this, the Age of Speed, there is all too little time available for the pursuit of pleasure in the rich realm of History. Matthew Arnold so beautifully describes it as:

"The fretful foam
Of vehement actions without scope or term."

There is much of this in the field of Forensic Medicine into which we shall make an excursion this evening to make acquaintance with three famous inquests.

1. The Case of Mary Blandy

The cause of the young Pretender, Charles Stuart has been lost at Culloden, and the blood bath of the butcher Cumberland still reeks over the land. In America the new work of Benjamin Franklin on static electricity is interesting the scientific world. English society is frequenting the hot springs at Bath, turning the famous Pump Room into a hot bed of court intrigue and society scramblings for social preferment. There one can almost rub shoulders with King George the Second and his queen, Prince Frederick and his court, the cream of London Society and influence—scheming parents, marriageable daughters, and eligible men.

The quiet little town of Henley on Thames presents a lovely contrast to all this, with the river flowing quietly under the stone bridge, and the White Hart Inn overlooking the river from its place on the London road. Nearby stands the old fashioned house of Mr. Blandy the attorney, very well to do—steward to most of the local gentry, kindly, hospitable, and noted for his good table. His wife is a well educated lady with social designs: and she it is who has brought up the only daughter Mary to be a bright and intelligent child. Mary's vivaciousness and flashing black eyes, together with a dowry of 10,000 pounds make her, in the eyes of the Henley folk, a very desirable match, in spite of a cosmetic disfigurement by the smallpox.

The approaches of the local youths are sharply and firmly repulsed by Mary's parents, whose social aspirations form an unyielding screen for the available material. The screen works all too well. No eligible fish are landed. Mary begins to mature and it is feared that she might even miss the marital boat entirely; so the parents decide on a season at Bath. The plan works. An eligible young army captain with prospects appears. The engagement takes place; but he is ordered away to India with his regiment, and—enter the Serpent!

Read before the Medical History Society, Winnipeg, March 3rd, 1955.

Capt. the Hon. Henry Wm. Cranstoun, age 32, pock marked and clumsy legged. His behaviour at cards is not beyond whispered suspicion, but he is the Honourable Henry Cranstoun the 5th, son of a Scots peer—grandson of the 2nd Marquis of Lothian—many debts, but the Honourable William Cranstoun!

The young captain returns from India, and is discarded finally, in favour of the recruiting officer trying to fill the ranks of the Hanoverians defeated at Culloden. In 1747 Cranstoun proposes to Mary Blandy — the fish is landed.

The Blandy menage is shaken to its roots, as Cranstoun discloses the fact of a pre-existing marriage, but he denies its validity. The Blandys accept the explanation and await the confirmation of Cranstoun's story. Another earthquake—Cranstoun's grand uncle writes from Scotland that not only is the wife living, but that there is a child also. There follows a stormy scene in the Blandy house. Cranstoun denies his status, Mrs. Blandy pleads. Father Blandy finally relents, as Cranstoun leaves for London, awaiting the legal invalidation by the Scottish Court.

Then Mrs. Blandy takes ill, and Cranstoun comes back to the Blandy house for six months board and lodging: and as the days pass, the scenes at the Blandy table occur with increasing frequency. Mr. Blandy is often very rude to Cranstoun, and the tension rises abruptly as word comes that the Scottish courts have declared the Cranstoun marriage completely legal and binding. This news is kept from Mr. Blandy. Mrs. Blandy dies of inflammation of the bowels, and Cranstoun is sent for to London, but he cannot come back, being watched for by a bailiff who will seize and arrest him for debts if he venture out of doors. Mary sends him 15 pounds. Lady Cranstoun in Scotland sends down a letter of condolence to the Blandys together with a present of kippered salmon; but this does not allay the daily stormy scenes at the Blandy table, as Mr. Blandy sees the prospects of the social alliance slipping away from him before his very eyes.

Cranstoun, about to return to Scotland, proposes to Mary that Mr. Blandy be given a "Love philtre", prepared by a "wise woman in Scotland", to make the old man love him. This might be considered a difficult assignment now, and, if Mr. Blandy should change his will, the lovers would lose the 10,000 pounds — a very disquieting thought.

In August 1750 Cranstoun returns from Scotland, and to demonstrate powers of the philtre he puts "something" in Mr. Blandy's tea. Lo and behold the following day shows Mr. Blandy more amiable.

Cranstoun's return produces another confession from him, that he had a child by another woman before meeting Mary. This is washed out in the beauty of the confession; but Mary, rummaging through Cranstoun's correspondence discovers that there is still another liaison presently going on in London. Now follows a disgusting scene of abject pleading for forgiveness — Cranstoun on his knees in the best approved manner.

Mr. Blandy's health is not of the best. The diagnosis is "gravel, gout and heartburn". Then Cranstoun begins to see Mr. Blandy's image appearing to him in dreams. He tells the servants that this is a premonition of impending death, and then leaves again for Scotland on call by his mother's illness. He takes with him a present of half a bottle of rum from Mr. Blandy.

Then comes a letter to Mary from Cranstoun with a present of some Scotch pebbles and a packet of "powder to clean the pebbles with". Shortly after this, Mr. Blandy is taken ill with abdominal pain and vomiting — the love philtre is beginning to take effect. A servant, Old Susan Gunnell, finding Mr. Blandy's morning tea untouched, drinks it, and is very ill for a week. Now observe the unspeakable stupidity of the household retainers, for later the morning tea, untouched again, is given to Anne Emmett, another old servant. She nearly dies, and Mary sends white wine, whey and broth for the invalid old woman. Mary, writing to Cranstoun, says that tea is not a suitable vehicle for the philtre. She is advised by letter to "put it in anything of substance whereby it will not swim a-top of the water". This is July 18th.

On August 4th Susan Gunnell has made gruel at Mary's order. Mary is seen stirring it in the pantry next day, and that night it goes to Mr. Blandy for his supper. Later on Mr. Blandy is very ill with pain, vomiting and diarrhoea, diagnosed as "a fit of colic", by the apothecary. Mr. Blandy gets another serving of gruel—Old Anne Emmett eats the leavings, and is promptly very sick with similar symptoms.

Now at long last the suspicions of the servants are aroused. Susan Gunnell tastes the gruel and finds a "settlement" at the bottom of the pan; she is promptly very sick again. The servants lock up the pan and send it to the apothecary. Relatives arriving are made aware of the sinister nature of the events by the servants.

Mr. Blandy is advised of all on Saturday the 10th of August. He refuses to permit seizure of Mary's papers, and, while taking his morning tea, he accuses her to her face. Mary says the tea was made as usual but she "changes countenance and quits the room". No wonder! She goes to her room to cover her tracks, goes through her correspondence and burns powder and letter in the grate. The servants follow her in, and put coals on the fire. This, of course, damps it down. They rake out the ashes and recover a packet of white powder and the charred edge of a letter with the words "the

powder to clean the pebbles with" still discernable. They send this evidence to the apothecary.

Now the famous Dr. Addington from Reading is called in consultation. He too suspects poison, and takes the powder and the sediment from the pan with him. At this time Mary's warning letter to Cranstoun is intercepted by the servants and shown to Mr. Blandy, whose pathetic comment is: "The poor love-sick girl. What won't a girl do for the man she loves?".

The relatives now prevent Mary from going to her father, and next day, when confronted with the evidence in presence of Mr. Blandy, she collapses. A sensitive soul indeed!

Dr. Addington making test of the white powder pronounces it White Arsenic. The days of the Marsh and Reinsch tests are not yet. Dr. Addington's test was probably the perception of the typical garlic odour on heating, a rather risky procedure. Foreseeing the future he calls Dr. Lewis of Oxford in consultation.

Now note the divergence of procedure from that of our time. Mary Blandy is confined to her room by the relatives, and dangerous things are taken from her. She tells people at this time that she "did not know it was poison till she had seen its effects".

The unfortunate Mr. Blandy dies on 4th August 1751. Mary showed anxiety for her situation, but neither sorrow nor remorse. Those flashing black eyes hide a still blacker soul.

She is now placed under the charge of Edward Herne, the parish clerk of Henley, an employee of Mr. Blandy; and, while he goes out to dig a grave for his old master, Mary makes a bolt for it. Across the bridge she goes, scandalously attired "with nothing on but a half sack petticoat, without a hoop". She takes shelter in "The Angel," another pub, across the river.

The 13 man coroner's jury under Richard Miles, Mayor and Coroner, sits on the 15th August, 11 days after Mr. Blandy's death. The story to date is told by the several witnesses examined. Dr. Addington and Dr. Lewis, having performed the post mortem, report as follows: "The fat on the abdomen was observed to be near a state of fluidity. The muscles and membranes were extremely pale. The omentum was preternaturally yellow, and that part which covered the stomach was brownish. The external part of the stomach was extremely discolored with livid spots; the internal part was extremely inflamed and covered almost entirely with extravasated blood. The intestines were very pale and flabby, and in those parts especially which were near the stomach, there was much extravasation. The liver was likewise sphacelated in those parts particularly which were contiguous to the stomach. The bile was of a very deep yellow; in the gall bladder we found a stone about the size of a large filbert. The lungs were covered in every part with black spots. The kidneys, spleen and heart were likewise greatly spotted; there was found no water in the pericardium. In short we never beheld a body in which the viscera were so universally inflamed and mortified. It is our real opinion that the cause of Mr. Blandy's death was poison."

Note that they do not state the nature of the poison in the deposition. Then follows the Coroner's warrant for the committal of Mary Blandy to prison pending her trial.

She is committed to Oxford castle with the utmost refinement and consideration. She goes accompanied by Mrs. Dean, her servant, and her tea caddies "almost full of fine Hyson", her favourite beverage. It is 4 a.m. and there she sits in a landeau with Mrs. Dean and two constables. She arrives in 7 hours, and inquires of the keeper: "Am I to be fettered?" Not only is she not fettered, but she has the run of the castle garden and is quartered in the best apartments in the keeper's house. She takes tea twice a day, walks in the garden and plays cards in the evening.

But this comes to an end with the spread of a rumour concerning her delivery, so on go the fetters, and the walks are discontinued. She now condescends to send for her chaplain.

The Home Secretary decides to have the prosecution conducted at the expense of the Crown instead of the aggrieved relatives. An unusual procedure, but it is felt that "noblesse oblige" might interfere with a rigorous and thorough prosecution.

Cranstoun has fled overseas to France; and across the Channel he sits immune, beyond legal process, watching the reports of the proceedings.

Now the streets of London are full of scurrilous pamphlets; so to allay false rumours the proceedings of the Coroner's jury are published. On the 2nd of March, 1752 the Grand Jury finds a true bill, and Mary is committed for trial.

The Town Hall of Oxford is under repairs and is not available for a trial, and the University refuses the use of the Sheldonian Theatre; but the trial is permitted in the Divinity School! The procession of eminent jurists arrives at the door of the Divinity School only to find that some wag had plugged the keyhole, and the door cannot be opened. The judges return in procession to their quarters (perhaps some of them slipped down the street to the "Mitre,") but Tuesday the 3rd of March, 1752 the trial begins at eight in the morning.

This is a trial of considerable interest, for it is the first where convincing scientific proof of poisoning is presented. After the case for the Prosecution is in, Mary Blandy speaks in her own defence (her counsel is not allowed to do so). She pleads the Love Potion, and declares her innocence.

After the witnesses for the defence have been heard, the Judge, Baron Legge charges the jury, stressing the importance of the question "Did she know that the powder was poison?".

The jury deliberates for five minutes, and returns a verdict of "Guilty". In a moving speech the Judge exhorts Mary Blandy to repentance, and then pronounces the death sentence. The trial has taken thirteen hours. It is 9 p.m.

She is taken back to Oxford Castle, having been granted 6 weeks for preparation. She arrives and sits down to a supper of mutton chops and apple pie.

The execution date is fixed for Saturday the 4th of April, but the University authorities protest that "to conduct such a ceremony during Holy Week would be improper and unprecedented", so the date is moved to Monday the 6th.

The gallows is set up on the castle green — a pole across the crotches of two adjacent trees. It will be eight years before Horace Walpole will write about an execution; "There was a new contrivance for sinking the stage under him, which did not play well, and he suffered a little by the delay, but was dead in four minutes".

At the foot of the gallows Mary Blandy makes a dying declaration of innocence, but admits giving the powder to both her father and mother.

The ladder is swathed in black. As she ascends, she says: "Gentlemen. Do not hang me high for the sake of decency".

The hangman desires her to "step up a little higher". She mounts two steps more, trembles and turning says: "I am afraid I shall fall". The rope is being placed round her neck. She pulls a handkerchief down over her face, prays for a moment and then by outstretched hand she gives the signal. The ladder is jerked away. She hangs for a half hour and is then cut down.

Coffin and hearse have been forgotten in the arrangements, so she is borne through the crowd on the shoulders of one of the sheriff's men, with her legs exposed very indecently. Later she is taken back to Henley and between her father and mother she is buried at one o'clock in the morning in the presence of a great concourse of people.

Part II will be continued in the August-September issue of the Review.

Wanted Assistant for G.P.

Assistant for general practice in Winnipeg. State age, experience, salary expected. Please enclose recent photograph.

Apply Box 601 Manitoba Medical Review.

Social News

Reported by K. Borthwick-Leslie, M.D.

Dr. T. C. Brereton, U. of Toronto '05, has accepted the invitation of the '55 U. of Toronto graduates to a banquet, etc., June 16th, prior to the C.M.A. meeting. Dr. and Mrs. Brereton leave June 2nd, because in transit, they attend the Kirkconnell wedding in Ottawa; on to New Jersey to visit son Bert who is with the R.C.A. International; back to Whitby, Ont. to son Ross (I do hope I have the sons straight) and then the Toronto do.

Dr. Brereton had the call to the "West" to Saskatchewan immediately after graduating. In 1920 he arrived in Winnipeg, a full fledged Paediatrician and has been Paediatricking ever since, professionally and "privately". Proudly reports twelve grandchildren, six of each.

Dr. and Mrs. Brereton were entertained "bon voyage" in Medical Arts Club Rooms, May 31st, by intimates of the staff and U. of T. graduates. Being of the "Press" as it were, a mere Manitoba grad, I was invited and loved it. Happy holiday to both and all concerned.

Of course there are two sons in Winnipeg too, and the grandchildren I saw were something to be proud of for sure. Don't blame him for "crowing".

♦

This has been a rough week for yours truly, can barely keep up with the June showers, weddings, etc., but did manage to, at a late hour, get to the Annual Dinner of the Canadian Federation of Medical Branch, Manitoba Division, May 30th, held at the Scottish Rite Cathedral, Wellington Crescent. (What an interesting spot that is). Retiring President Dr. Donna Huggins presiding hostess.

The honour guests were our graduating gals, and what cute gals they are; makes me weep in my coffee for those long gone days, even if most of us were never as cute. Dr. Maureen Ravie, who almost immediately marries Dr. Gordon Kulman and leaves for P.G. work in England, both of 'em. Dr. Lorraine Couture, Dr. Shirley Swail, and Dr. Meryl Chard, more anon about their activities.

The before dinner activities were enjoyed, even though I was late, the dinner excellent. The legal routine without argument. Next year's slate of officers is: President, Dr. M. McGuire; Vice-President, Dr. L. Hawirko; Secretary, Dr. D. Papageorgiou; Treasurer, Dr. R. Mathers.

The after dinner proceedings of course were "de luxe", provided by the "Hawaiian Trio"; those three glamour members you know of, if you have been reading the column. As a passing comment I might say that if seventeen of the recent, less recent, and definitely much less recent graduates and members, can take time out to do honor to our graduating kids **and** the association, there are about fifty more in town who could **very** easily enjoy a very gay social evening and also give both the kids and group a pat on the back. That's to **you** who didn't turn up. The rest of us are just as busy.

Dr. Gordon Ritchie, Immigration Medical Services, Dept. of National Health and Welfare, with Mrs. Ritchie and four children, have arrived on two months leave, from Glasgow, Scotland.

♦

Congratulations to the Fellowship winners of the National Research Council: Drs. S. A. Carter, A. E. Malkin, and G. F. Winkler. Also, sincere congratulations to Dr. Charles H. Hollenberg Jr., son of Dr. and Mrs. Abraham Hollenberg, who with the greatest of ease copped off not only the U. of M. Gold Medal, but all other five awards, including $265.00 in cash.

I'm not sure, but think that Dr. Margaret Rioch, one year ahead of me, was the only other one to win 'em all, and being a "shemale" she was asked to rescind the Surgery Medal to one of the male members. It's a phenomenal feat, for any one individual. I wasn't present at this convocation, but understand that everyone, for the dignity of the profession is thankful that "Bubble" is not also an addiction.

♦

Major James S. Hitesman, son of Dr. R. Hitesman was invested with the M.B.E. for Korean Service by Governor General Vincent Massey in his recent tour. Congratulations.

♦

Dr. and Mrs. W. E. Munro announce the engagement of Barbara Gail to Frank Donald McMillan, son of Mr. and Mrs. J. R. McMillan. The wedding June 18th.

Mr. and Mrs. C. Chadwick announce the engagement of their daughter Gail Bernice to Robert C. Hitesman, son of Dr. and Mrs. R. Hitesman. The date, June 11th, 1955.

Dr. and Mrs. R. A. Sprenger (nee Muriel Sibbald) Hamburg, Germany, announce the birth of Sandra Rita on April 28th, 1955.

Dr. and Mrs. Stewart McKenty happily announce the arrival of a daughter on April 24th.

Dr. and Mrs. T. W. Milroy announce the birth of Vivian Joan, a sister for Maryl, on April 22nd.

Dr. and Mrs. J. E. Burch also announce that Judith Ann made known her presence on May 22nd.

Dr. and Mrs. Fred Duval report the birth of Lindsay Anne on May 7th.

Dr. and Mrs. D. E. Lamond are surely happy for Dorrie Jean, sister for Rod and John.

Dr. and Mrs. A. J. DePape announce arrival of Joanne Angela, on May 21st.

So it's "Au Revoir" to my pal Dr. Kenneth Davidson who has migrated to 504 Medical Dental Bldg., 925 West Georgia St., Vancouver.

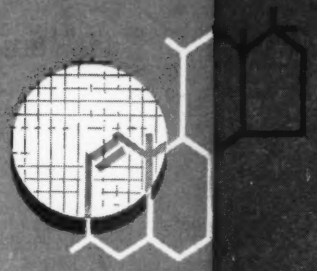
We will miss you, Ken. May be seeing you in a couple of years, when I too hope to migrate. Does your hair curl in the rain? Mine doesn't.

(Continued on Page 385)

announcing

a new era in

corticosteroid therapy



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College of Physicians and Surgeons of Manitoba

Council Meeting (Cont.)

October 16, 1954.

2. Communication Concerning Accounts by Dr._____

The Registrar presented a communication from a firm of solicitors advising that Dr. _____ had been bequeathed the sum of $500.00 in a will of one of his patients, and that Dr. _____ has submitted a claim to the Executors of the Estate for $2700.00. In a declaration submitted by Dr. _____ he states that during the past six years he made at least 900 professional calls on the deceased, which at $3.00 each amounts to $2700.00. Dr. _____ informed the Registrar that he had submitted no bill at any time to the deceased, and it was a verbal understanding only. He also stated that services were rendered over a lengthy period of years, but that six years was the time limit under the Statute of Limitations. The Registrar advised he had communicated with the College solicitor, but he was unable to give an opinion prior to this meeting.

The Committee agreed that for the number of professional calls made by Dr. _____ to the deceased, his bill was fair. The registrar was instructed to discuss the matter with the College solicitor, and if he is satisfied from the legal point the following motion be forwarded to the solicitor.

Motion: "THAT a reply be forwarded to the communication that from the information available it is the opinion of the College of Physicians and Surgeons of Manitoba that the charge which Dr. _____ has made for each professional call is a suitable charge." Carried.

3. Acknowledgment of C. P. & S. Annual Grant to Medical Library Committee.

The Registrar presented a communication from the Chairman of the Medical Library Committee extending the thanks of the Committee for the generous cheque of $750.00 received from the College.

4. Request from Dr._____ for Duplicate Certificate of Registration.

The Registrar presented a certificate from Dr. _____ that Certificate No. 451, issued to him on June 2, 1941, had not been in his possession since 1942, at which time it was either lost or misplaced. He requested a new certificate and enclosed the fee of $5.00.

The Committee agreed that a Certificate of Registration be issued to Dr. _____, plainly marked "duplicate."

5. Communication from Canadian Citizenship Council.

The Registrar presented a communication from the Executive Director of the Canadian Citizenship Council stating that two years ago they collected a number of policy statements and resolutions on the subject of immigration and published them in mimeographed form, and that the demand for them had continued up to the present. He further stated that since the subject of immigration is likely to be very much to the fore when Parliament meets after the first of the year, and since a number of organizations have made new policy statements and resolutions, he feels the present publication should be revised and is asking our co-operation and assistance. He requested this College's policy statements on the subject of immigration, resolutions having to do with the subject of immigration, other policy statements or resolutions having to do with programs or services for immigrants, and attitudes toward them, and any other policy statement dealing with immigration or immigrants not covered in the above categories. He stated he wished to have the revision available by January 1st, and that a copy would be forwarded when it is published.

Since the College has no policy concerning immigration, the Registrar was directed to draft a letter outlining the requirements for registration in Manitoba, and send without any comment on policy, and to check with the President or Chairman of the Executive Committee before forwarding it to the Canadian Citizenship Council.

6. Inquiry Re Artificial Insemination.

The Registrar advised he had received an inquiry from a member of the College concerning the legal aspects of artificial insemination. He stated he had written to the Canadian Medical Protective Association asking for information and had received the following reply:

"We just do not know what our courts will decide. The only cases we know from the British Isles have had other influencing factors so that the decisions could not be applied purely to artificial insemination but certainly the tone of the decisions suggested that the offspring are (illegitimate). If, when a clear judgment is rendered, that should be the decision the doctor who performed the insemination, would have laid himself open to trouble. Therefore, we are advising our members as strongly as we can that they should refuse to have anything to do with the procedure for the time being."

The Registrar advised that the Medico-Legal Society might discuss this matter later in the year. It was pointed out that a child born by this method has not the legal rights of a legally adopted child.

7. Complaint Concerning a Group of Doctors.

The Registrar presented correspondence he had concerning a complaint against a group of doctors, and advised that the complaint had been withdrawn.

8. Re: Advertisement by Dr. .....

The Registrar advised his attention had been drawn to an advertisement by Dr. ..... in the Canadian German Business Review, in which he advertised as a "Surgeon and Specialist for Women's Diseases," and he had written Dr. ..... that apart from the wisdom of such cards from an ethical point of view he would be interested to learn the basis on which he qualified as a Surgeon and a Specialist for Women's Diseases since no application had been received to have his name included on the Specialist Register. The Registrar stated he had received a reply from Dr. ..... enclosing a letter from the Canadian German Business Review stating they had printed his advertisement incorrectly, and Dr. ..... reported the announcement would not appear in future publications.

9. Unfinished Business from Council Meeting.

Report of Representatives to the Medical Council of Canada

Dr. C. H. A. Walton advised that in his report to Council in October 1954 he had not mentioned a communication he had received from the Registrar including a letter from Dr. H. H. Hepburn concerning reduction of unnecessary examinations and standardization of teaching and examining in all Canadian medical colleges. He suggested that a copy of Dr. Hepburn's letter be forwarded to each member of Council so that it might be dealt with in detail at the May meeting of Council and some instruction be given to the representatives to the Medical Council of Canada:

"September 12th, 1954.

Dr. A. T. Mathers,
Chairman, Committee on Qualifications,
Medical Council of Canada.

With a view to reduction of unnecessary examinations it is recommended:

That the ultimate objective to be aimed at should be the standardization of teaching, and of examining in all Canadian Medical Colleges, to a point where the graduates of all Canadian Medical Colleges may be acceptable to the Medical Council of Canada, for registration without further examination.

It is recognized that the direction or the control of teaching is not within the jurisdiction of the Medical Council of Canada, but with the consent and co-operation of the Medical Colleges, and of the Provincial Licensing Bodies, satisfactory arrangements might be made providing for the standardization of teaching and of examinations.

This might include submission of the proposed written papers to be set by each University, to the Main Board of Examiners of the Medical Council of Canada for approval, and the answers of the low-rated successful candidates for re-marking and assessment; also the interchange of clinical and oral examiners or assessors.

If the general principle be considered desirable it is recognized that a number of details would have to be worked out. This would take a year or two.

It might be desirable to have all candidates for the L.M.C.C. divided into two groups. The first group to consist of all current graduates of all Canadian Medical Colleges, the successful graduation candidates to be enrolled on the register of the Medical Council of Canada under the proposed plan, when perfected. The second group to consist of all other candidates, who would be obliged to take the regular examinations of the Medical Council of Canada as at present, with or without added subjects, such as Pediatrics and Psychiatry.

It might be considered advisable that the low level graduating candidates be moved from group 1 to group 2. Recent graduates who obtain a mark, below one to be decided upon, might continue their interneship and post-graduate study for a year or more and then take the regular examinations of the Medical Council of Canada.

Until the plan has reached a workable stage of development examination procedures currently in vogue should be continued.

I would like to move the following motion:

It is moved that this committee recommend to General Council, approval in principle, of a plan to develop a procedure whereby the number of examinations be reduced, by delegating in whole or in part, to Canadian Universities, or Medical Colleges, the function of examinations, which when satisfactorily controlled, will make successful candidates acceptable for enrolment on the register of the Medical Council of Canada.

H. H. Hepburn, M.D."

The Registrar advised that Section 12C of the Canada Medical Act states that: "the possession of a Canadian university degree alone, or a certificate of provincial registration founded on such possession, obtained subsequent to the date, when the Council shall be first duly constituted under this Act, shall not entitle the possessor thereof to be registered under this Act." An amendment to the Canada Medical Act would be required.

He also stated that at the Council meeting held October 13, 1951, a communication from the Registrar of the College of Physicians and Surgeons of Quebec was considered, advising that "the Board of Governors adopted unanimously the motion submitted to the Medical Council of Canada by the Association of Canadian Medical Colleges:

'Resolved that the Association of Canadian Medical Colleges requests the Medical Council of Canada to give serious consideration to the registration of all medical graduates of accredited Canadian medical schools without further examination.' Our College of Physicians is anxious to know the decision of your council regarding this resolution. We believe that the adoption of this motion by the twelve Universities and the ten Medical Licensing Bodies throughout Canada would be very beneficial to our students and physicians and would safeguard our rights and privileges." Dr. Corrigan advised that the motion had been turned down by the Medical Council of Canada at the meeting in September, 1951, and no action was taken by Manitoba, C.P. & S.

10. Payment of Luncheon.

Motion: "THAT the Treasurer be authorized to pay for the luncheons for the members of the Executive Committee." Carried.

Adjournment: 1.45 p.m.

Registration Committee

November 29, 1954.

Enabling Certificate Deferred

Wasyl (William) Shahariw, Certificate (in place of diploma), Donetz Medical College, 1941.

Enabling Certificate Granted

Ralph Fredman, L.R.C.P., Edinburgh, 1941; L.R.C.S., Edinburgh, 1941; L.R.F.P.S., Glasgow, 1941.

Five Communications from Foreign Physicians

The Registrar read five sample communications received from time to time from European and Asiatic physicians seeking admission to Canadian licensure. It appears that a communication from any licensing body in Canada assists applicants in securing a visa to enter Canada. The Registration Committee may wish to make some recommendation to the Executive Committee or Council.

Certificates of Registration Confirmed

Geoffrey Victor Sutton, M.R.C.S., England, 1952; L.R.C.P., London, 1952.

Karl Hugo Krueger, M.D., U. Danzig, 1941; L.M.C.C., 1954.

Certificates of Registration Granted

Yin-Chei Chen, M.D., National Sun Yat Sen U., 1945; L.M.C.C., 1954.

Janet Elizabeth Arnott, M.B., B.S., U. London, 1953.

John Noel Hassett, M.B., B.Ch., National U. of Ireland, 1953.

Certificate of Licence Confirmed

Donald Carey Francis Metcalfe, M.D., C.M., Dalhousie U., 1948; L.M.C.C., 1948.

Certificates of Licence Granted

Yale Knox Carter, M.D., C.M., Queen's U., 1953; L.M.C.C., 1954.

Joe Joshua Prag, M.B., B.Ch., U. Witwatersrand, 1948; M.D., U. Witwatersrand, 1952; D.P.H., U. Glasgow, 1952.

Communication from Air Commodore for Chief of the Air Staff Concerning Licensing of Air Force Personnel

The Registrar presented communications from the Air Commodore for Chief of the Air Staff stating that the R.C.A.F. requirement is that a candidate for a commission shall be fully registered in one Canadian province or at least have qualifications which will allow such registration. He stated that Headquarters would be most willing to see a mutually satisfactory arrangement made so that in future R.C.A.F. medical officers might be adequately covered. He pointed out that the Army's arrangement is to forward the degree certificate and other documents to the Registrar's office, but suggested that this might be difficult to do since many officers have documents stored in safekeeping, and have only photostatic copies of their qualifications with them. He inquires whether it would be sufficient for the applicant to show documentary proof that he is fully registered and in good standing in one Canadian province, since it could be presumed that if he is fully registered in one Province, his documents had been scrutinized by the original Canadian province.

The Committee agreed they would be willing to accept photostatic copies of diplomas and certificates from members of the R.C.A.F. applying for temporary licence, but not registration in another province.

Communication from College of Physicians and Surgeons of Saskatchewan re Interneship Requirement in Ontario

The Registrar presented a communication from the Registrar, College of Physicians and Surgeons of Saskatchewan, advising it had been brought to his attention that after 1959, all aliens applying for registration in Ontario will be required to have served two years' interneship in addition to having their citizenship. He suggested it might be advisable for the western provinces to consider similar action, and requested comments.

The Committee agreed that citizenship requirement was not practical in this Province, since Chinese and American applicants did not intend to remain in Canada, but wished reciprocal registration with the General Medical Council to practise in British colonies. This matter was referred to the Executive Committee or Council.

List of Hospitals Approved for Interneship by the University of Manitoba

The Registrar advised that in March 1954, a request had been received from Grace Hospital that the Council approve the hospital for the training of candidates for the L.M.C.C. In the

past the Registration Committee had accepted training at Grace Hospital but had dealt with each individual case on its merits. The Faculty of Medicine, University of Manitoba, was asked whether it would be prepared to consider the formation of a joint committee with the C.P. & S. to assess hospitals suitable for interneship training. The Dean of the Faculty advised that two years ago a committee had been set up under the chairmanship of Dr. A. T. Mathers to assess hospitals for undergraduate interneship. A questionnaire had been sent out to several hospitals including Grace, and the data had been under study for some time. He suggested that if it was desired to have a joint committee set up, the Faculty should be represented by Dr. Mathers or someone on his committee whom he might designate. This communication was presented to the Council at the May 1954 meeting, and it was moved that the Registration Committee consult with the Committee of the Faculty of Medicine concerning approval of hospitals for interneship. In November 1954, Grace Hospital inquired whether there was any further word from the Faculty of Medicine concerning the approval of the hospital for training of candidates for L.M.C.C. A list of hospitals approved for interneship was received from the Faculty of Medicine, and it was pointed out that Grace Hospital was approved for Obstetrics and Gynaecology and seeks approval for a rotating service.

The Registrar was directed to forward a reply to Grace Hospital that interneships had been accepted in the past from the hospital, but that each case was considered on its merits, and it was agreed to keep approval on a temporary basis.

Specialist Committee

November 30, 1954.

The first meeting of the reactivated Committee set up by the College of Physicians and Surgeons to consider applications for specialist standing was held at 1.00 p.m., in the Medical Arts Club Rooms, on Tuesday, November 30th, 1954.

Present were: Dr. C. H. A. Walton, Chairman, C.P. & S.; Dr. F. K. Purdie, C.P. & S.; Dr. B. D. Best; Faculty of Medicine, U. of Man.; Dr. N. L. Elvin, Faculty of Medicine, U. of Man.; Dr. P. H. T. Thorlakson, M.M.A.; Dr. A. B. Houston, M.M.A.; and Dr. M. T. Macfarland, Registrar, C.P. & S., ex-officio.

The Chairman advised that the original Specialist Committee to consider applications for Specialist registration from those without Royal College standing was disbanded by the By-law on December 31st, 1953, when it was anticipated that the number of applications would be small enough for Council to consider. However, the number of applications is still quite large and Council felt that it could not give the applications the consideration they should have. An extra problem is that the Manitoba Medical Service acknowledges the College Specialist Register, which has caused embarrassment because of the economic picture and the delay in considering the applications, since Council meets only twice a year. This Committee has been reconstituted by act of Council on the same basis as the previous Committee, two members from the C.P. & S., two from the M.M.A., and two from the Faculty of Medicine, University of Manitoba.

Of the ten applications considered, seven were granted specialist registration and three were deferred pending receipt of additional information.

Publication of Specialist Register

Motion: "THAT the Registrar make arrangements to have the Specialist Register published." Carried.

Executive Committee

Winnipeg, Manitoba,
January 11th, 1955.

A meeting of the Executive Committee was held in the Board Room, Medical College, Winnipeg, on Tuesday, January 11th, 1955, at 8.00 p.m.

Present: Dr. C. B. Stewart, Chairman, Dr. F. P. Doyle, Dr. G. H. Hamlin, Dr. Ed. Johnson, Dr. M. R. MacCharles, Dr. C. H A. Walton, President, ex-officio, and Dr. M. T. Macfarland, Registrar, ex-officio.

1. Business Arising from Council Meeting, October 16, 1954.

A. Acknowledgment from Manitoba Medical Association re Grant for Extra Mural Postgraduate Work

A communication was presented from the Manitoba Medical Association acknowledging the amount up to $500.00 for extra mural post-graduate work for the season 1954-55 granted by the College.

The letter further stated that when appointments to the Standing Committees were made by the Executive Committee on November 14th, it was agreed that the Extra Mural Committee which formerly made arrangements for the District Society meetings outside Greater Winnipeg, should be combined with the Medical Education Committee under the chairmanship of Dr. J. P. Gemmell. The Executive Committee of the M.M.A. hopes this alteration will allow greater utilization by the District Medical Societies of clinical days suggested by the Committee on Medical Education.

B. Acknowledgment from Manitoba Medical Association re Grant for Payment of Members of Fee Assessment Committee, Workmen's Compensation Board

A communication was presented from the Manitoba Medical Association expressing appreciation for the grant from the College re payment to members for attendance at meetings of Fee Assessment Committee, Workmen's Compensation Board.

C. Request from Faculty of Medicine, re Employing Medical Artist

The request from the Faculty of Medicine for a donation of $500.00 to $1,000.00 to help in the establishment of a medical artist, was referred to the Executive Committee from the Council.

A progress report on the problem of obtaining sufficient money to support a medical artist at the University of Manitoba for his first year was received. The D.V.A. is contributing the sum of $1,000.00 towards the expenses, and three private non-medical individuals have contributed the sum of $500.00 to provide essential equipment in the studio of the medical artist. Plans for the building of a studio have been discussed with the Dean and with Mr. Crawford of the University, and these will be finalized by the end of January.

After considerable discussion of whether the project was within the scope of Section 91 of the Medical Act, the Committee agreed that a donation of $500.00 be made to the University towards the expense involved in setting up facilities for a medical artist.

Motion: "THAT the College of Physicians and Surgeons of Manitoba grant to the University of Manitoba the sum of Five Hundred Dollars ($500.00) towards the expense involved in setting up facilities for a medical artist when sufficient funds are on hand and the medical artist actually secured, with the understanding the grant would be for the initial year only." Carried.

Social News (Continued)

Lost and Found Department

Dr. Daniel Shapiro '54 is now doing P.G. work at Cedars of Lebanon Hospital, Beverley Hills, California.

Dr. Thomas W. Fyles '49, M.S.C. '52 has been appointed scholar in Medical Science by the John and Mary Markle Foundation of New York.

The foundation has granted $6,000.00 annually to the faculty of medicine where Dr. Fyles will teach. He is I believe at present travelling in British medical schools and hospitals as a McLaughlin travelling fellow.

Dr. Arnold Gerald Rogers '50 has received his Master of Science Degree in medicine from the University of Minnesota as of last December.

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Obviously everyone knows that the Manitoba Clinic, "Baldy" Mac and his most impressive staff have also migrated to their new deluxe quarters at 790 Sherbrooke St. We all miss them in the Medical Arts. I particularly miss Bob Beamish. (Probably he is thankful to more or less escape my clutches).

Sincerely the very best envious wishes to all members of the Clinic in the new quarters.

At the moment, we are hoping to survive the battle of seniority as far as adequate space in the building. It's the first time I have appreciated openly my, shall we say "Maturity"?

Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1955 Mar. 27 to Apr. 23,'55	1955 Feb. 27 to Mar. 26,'55	1954 Mar. 21 to Apr. 17,'54	1954 Feb. 21 to Mar. 20,'54	Total Jan. 1 to Apr. 23,'55	Total Jan. 1 to Apr. 17,'54
Anterior Poliomyelitis	0	1	4	5	2	23
Chickenpox	96	172	140	182	628	701
Diphtheria	0	0	0	0	1	0
Diarrhoea and Enteritis, under 1 year	4	1	10	14	13	46
Diphtheria Carriers	0	0	0	0	0	0
Dysentery—Amoebic	0	0	0	0	0	0
Dysentery—Bacillary	0	1	5	1	2	9
Erysipelas	2	1	3	3	5	10
Encephalitis	0	0	0	0	0	0
Influenza	44	12	14	7	64	32
Measles	275	494	40	155	1626	333
Measles—German	8	27	3	1	47	9
Meningococcal Meningitis	0	2	1	0	7	3
Mumps	115	172	151	197	615	560
Ophthalmia Neonatorum	0	0	0	0	1	0
Puerperal Fever	0	0	0	0	0	0
Scarlet Fever	10	19	60	63	82	254
Septic Sore Throat	2	1	3	11	9	22
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0
Trachoma	0	0	0	0	0	0
Tuberculosis	40	42	38	51	134	125
Typhoid Fever	0	0	0	0	0	2
Typhoid Paratyphoid	0	0	0	0	0	0
Typhoid Carriers	0	0	0	0	0	0
Undulant Fever	0	0	0	1	0	1
Whooping Cough	32	78	12	11	265	32
Gonorrhoea	71	60	117	100	304	413
Syphilis	7	15	9	7	45	27
Jaundice Infectious	20	20	43	28	108	117

Four-Week Period March 27th to April 23rd, 1955

DISEASES (White Cases Only) *Approximate population.	*828,000 Manitoba	*861,000 Saskatchewan	*2,825,000 Ontario	*2,952,000 Minnesota
Anterior Poliomyelitis	—	—	7	7
Chickenpox	96	15	1683	—
Diarrhoea & Enteritis, under 1 year	4	8	—	—
Diphtheria	—	—	1	1
Diphtheria Carriers	—	—	—	—
Dysentery—Amoebic	—	—	—	1
Bacillary	—	6	9	6
Encephalitis Infectious	—	—	1	—
Erysipelas	2	1	1	—
Influenza	44	2	50	114
Jaundice Infectious	20	53	50	114
Measles	275	29	2478	1361
German Measles	8	—	2999	—
Meningitis Meningococcus	—	2	7	2
Mumps	115	15	1799	—
Ophthal. Neonat.	—	—	—	—
Puerperal Fever	—	—	—	—
Scarlet Fever	10	12	275	105
Septic Sore Throat	2	16	3	59
Smallpox	—	—	—	—
Tetanus	—	—	—	—
Trachoma	—	—	—	—
Tuberculosis	40	19	60	106
Tularemia	—	—	1	—
Typhoid Fever	—	2	—	1
Typh. Para-Typhoid	—	4	1	—
Typhoid Carriers	—	—	—	—
Undulant Fever	—	1	—	17
Whooping Cough	32	13	392	52
Gonorrhoea	71	—	145	—
Syphilis	7	—	38	—

DEATHS FROM REPORTABLE DISEASES

April, 1955

Urban—Cancer, 50; Influenza, 1; Pneumonia (other forms). 15; Syphilis, 1; Tuberculosis, 3; Septicaemia and Pyaemia, 1; Other diseases attributable to viruses, 2. Other deaths under 1 year, 23. Other deaths over 1 year, 188. Stillbirths, 14. Total, 298.

Rural—Cancer, 28; Influenza, 5; Pneumonia (other forms), 13; Tuberculosis, 3; Diarrhoea and Enteritis, 2; Rubella (German Measles), 1. Other deaths under 1 year, 18. Other deaths over 1 year, 179. Stillbirths, 15. Total, 264.

Indians—Pneumonia (other forms), 2. Other deaths over 1 year, 4. Stillbirths, 1. Total, 7.

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Anterior Poliomyelitis—Only two definite cases reported to date of writing (May 16th).

Vaccination Program is going ahead in spite of wet roads, rumors, etc. Very few reactions of any kind have been noted to date.

Measles, Mumps and Whooping Cough—All showing lowered incidence with the approach of summer.

Jaundice Infectious remains a worry in some areas.

Detailmen's Directory

Representing Review Advertisers in this issue, whose names are not listed under a business address.

Ayerst, McKenna and Harrison
W. R. Card — 40-7115
C. G. Savage — 3-4558
R. A. E. Perrin — 42-4703
Jack R. Ostrow — 52-3242

British Drug Houses
F. J. Burke — 44-4991
W. B. Pipes — 42-2023
W. S. Langdon — 43-1325

Ciba Company Ltd.
Leslie D. MacLean — 6-1242
Ralph L. Whitfield — 42-5340

Connaught Laboratories
Brathwaites Ltd. — 92-2635

Frosst, Chas. E.
W. M. Lougheed — 40-3963
W. J. McGurran — 20-8231
E. R. Mitchell — 40-2132

General Electric Co. X-Ray Dept.
E. A. Nickerson — 92-4277

Horner, Frank W. Limited
Richard Briggs — 43-0431
Jos. Errenberg — 59-0558
Linc. Sveinson — 43-0072

Ortho Pharmaceutical Corp.
G. H. Hofer — 42-3000

Pfizer Canada
E. E. Conway — 6-4274
B. H. Horsfall — 6-6657

A. H. Robins (Canada) Ltd.
Norman Haldane — 72-5961

Poulenc Limited
W. J. Plumpton — 4-5561

Schering Corp. Ltd.
Halsey Park — 40-4346

Schmid, Julius
W. H. Davis — 20-6941

G. D. Searle & Co.
Harry Chambers — 50-6558

Shuttleworth, E. B.
S. M. Fairclough — 3-0158

Will, Chas. R.
A. C. Payne — 83-2055

Winthrop-Stearns
R. M. Kelly — 40-6459
Russell B. Ferguson — 4-9437

Wyeth & Bro., John
A. W. Cumming — 3-5271
Stuart Holmes — 23-5523